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NEWS SUMMARY

'THE DARK AGE FOR ART' of the present day will pass away, and there is hope for the future, Mr. D. H. McMorran told the Master Carvers' Association. p. 1081

'BRIDGING THE GAPS,' the second joint symposium on problems of the industry to be held at Preston, is the subject of a special report. p. 1097

A GROUP of local authorities are collaborating to sponsor a system of school building with the object of (a) saving money on mining subsidence, and (b) getting better value from suppliers on the basis of a big building programme. p. 1100

THE COURT OF COMMON COUNCIL are to invite Messrs. Chamberlin, Powell and Bon to prepare a 25-acre housing scheme for the Barbican area. p. 1100

'ELECTROLUMINESCENT' windows which give 'daylight' for 24 hours are reported from USA. p. 1101

SMALL FALLS in the price indices of building and civil engineering and house building materials are reported by the BoT. p. 1111

PRINCIPAL CONTENTS

ILLUSTRATIONS

	PAGE
PORT COCHERE AT THE SAVOY HOTEL. By Eric Janes	1084
DEPARTMENT STORE, BRISTOL. By Sir Percy Thomas and Son	1088
SINGLE-STOREY HOUSE, WEST CHILTINGDON, SUSSEX. By Philip Pickering	1094

ARTICLES

MASTER CARVERS: Annual Luncheon ...	1081
CORRESPONDENCE	1081
LAVENHAM REVISITED: The Case for National Trust Action	1082
SOCIETIES	1083
BOOKS	1087
BUILDING FOR ATOMIC ENERGY: Discussion on Sir John Cockcroft's Paper	1093
NEWS OF WEEK	1095
ARCHITECTS REGISTRATION COUNCIL	1096
'BRIDGING THE GAPS': Joint Symposium	1097
MANAGEMENT IN THE AMERICAN CONSTRUCTION INDUSTRY: Mr. Trench's Address to the IOB	1098
BUILDING IN THE CITY: Proposals for Barbican Area	1100
SCHOOL BUILDING: Local Authorities Collaborate	1100
DESIGN AND DETAILING OF SCREEN WALLS: Fourth Brixton School Lecture...	1101
'DAYLIGHT' FOR 24 HOURS	1101
IN PARLIAMENT	1102
LCC: Hammersmith Fly-over...	1103
LAW REPORTS	1104
PRICES OF MATERIALS	1105
RATES OF WAGES	1108
PLANT AND MATERIALS	1110
FUTURE CONSTRUCTION	1113

THE BUILDER

Incorporating ARCHITECTURE & THE BRITISH ARCHITECT

Vol. CXCIII December 20 1957 No. 5986

NUCLEAR POWER STATIONS

THE discussion which we print this week on Sir John Cockcroft's recent paper at the RIBA (extracts from which were given in our last issue), will probably cause many laymen, and perhaps some nuclear scientists as well, to do some fresh thinking about the problems involved in the design and siting of atomic power stations.

Hitherto, the general inclination of the layman has been to regard these buildings as monstrosities, ruining the beauty of remote estuaries and coastal areas—things to be merged as much as possible with the landscape, or at least carefully screened from view. Two interesting alternatives to this rather pessimistic conception were put forward in the discussion to which we have referred.

First, Professor Sir William Holford suggested that we must stop thinking along these lines and look upon these buildings as providing an enormous opportunity to create a greater and quite different amenity. Instead of trying to minimise and reduce their effect we must 'grasp the totality of the problem and use all the devices of design, orderliness and landscape formation to create the landscape of the atomic age.'

Mr. John Whitehead suggested a sharply contrasting prospect. These power stations, he said, were designed for a life of only 20 years and would stand for a long time as ruins. We ought, therefore, to think as much about how they would look as ruins as we did about how they should look as power stations! A new and rather startling aspect of the problem!

But there was no facetiousness about his other suggestion, namely, that the atomic piles should be placed underground. This has apparently been done already in the United States. If it were feasible in this country—and only the scientists are competent to offer an opinion—the whole problem would be neatly solved. All the power stations needed could be provided without any injury to the beauty of the countryside. Almost like having our cake and eating it!

As things are at present there is probably less cause for public discontent than might have been expected. Calder Hall was admittedly rather hideous, with its tangles of exposed pipes and steelwork, but allowances were readily made because of its experimental character. Since then the layouts of such installations have been much improved and their structural 'casings' quite neatly contrived. But, as Sir William Holford said, the unity, the work of art, has yet to be achieved.

On the question of siting, the recent accident at Windscale has provided a grim reminder of the fact that even nuclear physicists can make mistakes. We had been told by the experts that atomic power stations were perfectly safe and were being built for the time being in remote areas merely as a precautionary measure. Remote sites may be necessary after all.

As to the visual design of these great projects, it is clear that the architect must be brought into full consultation at the outset; to be merely called in to minimise the unsightliness of something already determined is not good enough. As a trained planner and specialist in the aesthetic arrangement of three-dimensional form it is certain that he could make a contribution of real creative value. But first he must equip himself with knowledge of the special problems involved.

The architectural design of nuclear power stations is never likely to become a large part of architectural practice, but the potentialities of nuclear energy are prodigious. Ultimately it may become our chief source of power, light and heat. The more architects know generally of the subject the better. A correspondent, in a letter which we publish this week, suggests that the subject is one that might be more energetically pursued by the RIBA, possibly by means of periodical symposia. We hope the idea may be followed up.

Notes of the Week

South African Architecture

NEWS that the next major exhibition of architecture at the RIBA is to be of South African architecture will be especially welcomed by those who know the high standard that the best of the Union's new buildings reach. The exhibition is being prepared by Professor John Fassler, Dean of the Faculty of Architecture of the Witwatersrand University, but will take in architecture from all over the Union, not least, it will be hoped, work from graduates of the Cape School of Architecture who—thanks to the habit of its Head, that remarkable character Professor L. W. Thornton White, of regarding the whole of Africa as his parish—are working in every part of Africa. In fact the work of the branch offices of the old-established firms in the newer towns where school-trained men are in charge is often more advanced than that of their more revered seniors in the great cities.

Africa in general, and the Union in particular, suffers from an almost total lack of architectural tradition. The 'Wits' students, for example, have no indigenous building within the Johannesburg area more than 60 years old. Students, unless they are able to supplement their home university studies by a period in Europe, must fall back on a synthesis of international architecture built-up from seeing buildings in print, and internationalism is, of course, the prevailing note in Johannesburg. Fortunately, Professor Fassler is well aware of this danger. The situation in the Cape after 300 years of colonisation by Dutch, French and English is very different, of course, but Cape Dutch is the main traditional style; the Gothic revivalist architecture, of which at the end of last century a good deal came out by sea to the Cape and to Durban, is and perhaps always was dead.

To-day the Union has much architecture to offer of interest from men like Norman Eaton, Le Roith, Thornton White himself, Franz Te Water, David Naudé, Keith Gow of Durban, to mention only a few. The exhibition will be awaited with considerable interest. May Canada now follow suit!

What, by the way, has happened to the idea, first mooted during Professor Richardson's tenure of RA presidency, of offering membership to the Royal Academy to some of the leading Commonwealth architects, painters and sculptors? To-day the suggestion seems to be as useful and forward-looking as it did when it was first made. Will Mr. Charles Wheeler not look into its merits?

ST. BRIDE'S RESTORATION.—The rededication of St. Bride's Church, Fleet-street, after war damage, was performed on December 19 in the presence of the Queen and the Duke of Edinburgh. Our view shows the nave looking towards the west end. In the south aisle is the organ console. The removal of the galleries means that the church once again appears as in Wren's original design. The architect for the reconstruction is Mr. W. Godfrey Allen, FSA, FRIBA

Portrait of Guildford

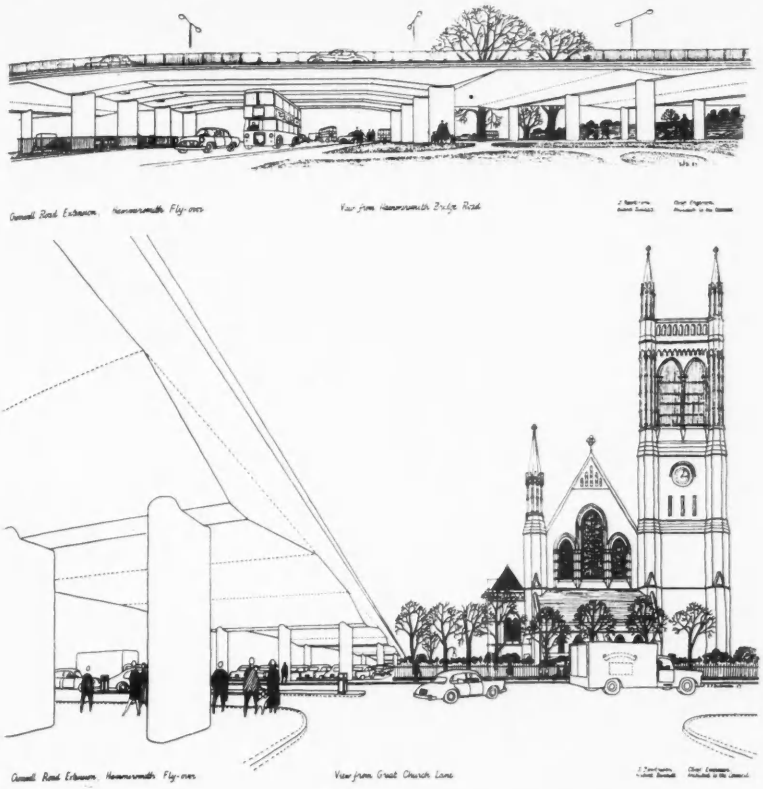
THE GUILDFORD CHAPTER of the SE Society of Architects has mounted, at the RIBA, an exhibition by the Photography Department of Guildford School of Art. Recently purchased by the Guildford Corporation, it is an accomplished and penetrating portrait of a town, writes Basil Marriott. I do not know which to congratulate most — the young photographers and their director, Joy Thomas; the Corporation for their realisation of a local asset; or the Institute for its opportunism, for the show is most seasonable in being a 'family occasion' though with far wider than local interest.

Apart from the pleasure it gives, the exhibition particularly concerns architects who, for their sins, are looked to on the committees of preservation societies to close the stable doors after the horse has been converted into a motopian juggernaut. There is nothing like the camera's objective eye for showing what this is all about before it is too late—or after!

But the camera is seldom in such capable hands. This particular portrait is unusually perceptive; as is natural under the guidance of Mrs. Thomas (remembered as an able member of the pre-war Reimann School's staff) it is 'documentary' in the best sense, suggesting the affectionate but not altogether uncritical view of parent or child towards its family. To anyone interested in the look of people and places (and surely that means all architects?) there is probably no such thing as a wholly bad photograph, but I would say the standard here is technically as well as pictorially high. Both colour and monochrome are used, and new as well as old buildings peopled with those who live and work in them, combine in the survey. Do see it before December 23.

New View of the Abbey

A SCHEME designed to open up the view of Westminster Abbey from Victoria-street, as an alternative to the present corridor-like effect, has been considered by the Royal Fine Art Commission and is now before the LCC Town Planning Committee. Outline approval is sought for the redevelopment of the whole of the island site between Victoria-street, Abbey Orchard-street and Great Smith-street by two inter-connected blocks of offices, one of nine and the other of six storeys. The Legal and General Assurance Co., are the developers and the architect is Ronald Fielding, ARIBA, Aldwych-house, WC2.



THE HAMMERSMITH FLY-OVER.—New proposals for the Hammersmith Fly-over in connection with the Cromwell-road extension scheme were submitted to the London County Council on Tuesday. Two perspectives of the proposed fly-over road are shown: (Top) View from Hammersmith-road; (below) view from Great Church-lane, looking west. Details of the scheme are given in LCC news on page 1103

MASTER CARVERS

Mr. McMorran on 'A Dark Age of Art'

THE PRESIDENT of the Master Carvers' Association, Mr. Esmond Burton, must have been well satisfied by the quality of the speeches given at the Association's annual luncheon, held in London last week, when the principal speaker was Mr. D. H. McMorran, ARA, FRIBA, Past Master of the Art Workers' Guild.

After defining a sculptor as one who executed a work and then tried to find a client, and a carver as one who first found a client and then did what was asked, MR. MCMORRAN spoke on current art and architectural trends. Preoccupation with voids was general, he said; perhaps in a material world we had lost the feeling of permanence, which could account for the vacant façades of much modern building and for the holes of which some modern sculpture was so largely composed.

It would be silly, Mr. McMorran thought, to be optimistic about the immediate future for sculptors and, indeed, for the arts. Yet nowhere in the world—in France, Italy or anywhere else—could be found skill surpassing that of those architects and craftsmen who were carrying out war-damage repair work, especially on churches. Elsewhere, apart from some delightful contributions (and here Mr. McMorran mentioned the rebuilt St. Bride's of Mr. Godfrey Allen, and the LCC Bousfield School in the Boltons, SW, by Chamberlin, Powell and Bon), the general level of factory and office work, schools and churches was at a very low ebb; 'chaotic and meaningless efforts' he called them, banal to the extreme, even though some of the designers had applied blobs in the form of sculpture—applied, he suspected, to draw the tortured eye away from the architecture.

The Critics Blamed

'For this state I largely blame the critics,' Mr. McMorran added, 'for they countenance these travesties and their continuance because they know that if they expose them they expose the whole sham of modern art. What we are in fact seeing is the death struggle of the Gothic revival. The Royal Festival Hall is an emasculated great grandchild of St. Pancras Station. But the present trend will pass away, and there is hope for the future. What will go on, and what will always go on, is the great Classical tradition which satisfies the spirit of man and offers a sense of unity, elegance and repose. It is a flame which we must struggle to keep alive in this age, which I think is a dark age, and I believe that it is people like your master carvers, Mr. President, who will help us to carry on until the dawn comes, as come it must.'

The toast of the Guests was genially proposed by MR. JAMES N. WHITE and responded to by MR. A. LLEWELLYN SMITH, MBE, FRIBA, secretary of the Art Workers' Guild, who said that he felt he spoke for all architects in the room when he said that for choice they would use the sculptor's art in their buildings, and knew that if they did there were the members of the Master Carvers' Association to carry the work through.

Mr. McMorran was introduced by MR. PETER MORTON, the hon. secretary of the Association, who recalled some of the lighter moments of the St. Paul's Watch during the war and offered the workshops of the Association's members for visits by any architectural students who might be interested. A vote of thanks was given by MR. MARSHALL WALKER.

CORRESPONDENCE

Architects and Nuclear Power

To the Editor of *The Builder*

SIR,—As one of the several hundred architects who listened to Sir John Cockcroft's lecture on building for nuclear energy, at the RIBA last week, may I take up two points which arose in the discussion?

First, I would like to endorse the view of the speaker [Mr. J. F. Munce—ED.] who suggested that architects, if they are wise, would learn more about nuclear fission processes so as to be able to play a fuller part in discussions on the layout of nuclear power installations. At present, it seems, the architect is brought in to dress up schemes that have in all their essentials been decided, and the scale and size of these schemes means that, when this stage has come, there is often little he can do about it.

Where can the architect obtain more information on nuclear fission? I would put forward the suggestion that the RIBA Science Committee should organise a symposium on the subject during the early part of next year; I believe such a symposium would be crowded out.

The second point I would support is the plea made by a town planner from Essex [Mr. L. N. Fraser—ED.] that proper attention be given to the planning and housing of the switchgear and transformers of the new nuclear power stations. If I understood the speaker correctly, the planning responsibility for this comes under an authority other than the AEA, and the opportunity for casual planning treatment of a side of electrification works which can give great visual offence is obviously there. It seems to be quite vital that future nuclear stations and their ancillary distribution system be planned together.

I enclose my card.

CHARTERED ARCHITECT.

∴ The subject of planning and siting of nuclear power stations is dealt with in a leading article on page 1079. The discussion on Sir John Cockcroft's paper is summarised on page 1093. —Ed.

By courtesy of Miss F. L. Ranson

The Wool Hall, Lavenham. Note the rectangular lead window lights. Repairs have been beautifully and knowledgeably carried out

LAVENHAM REVISITED

The Case for National Trust Action

Reports that all was not well with current restoration and development work at Lavenham in Suffolk have recently reached us, and we have invited Mr. J. Fletcher Watson, JP, ARIBA, the distinguished Norwich architect, to visit and report upon the situation as he sees it. Mr. Fletcher Watson's report now follows; in it he says that 'Lavenham is in the hands of the "strippers and restorers"'; and he believes that the National Trust should quickly take this 15th-century weaving town under its wing.—THE EDITOR.

I RECENTLY re-visited Lavenham, in Suffolk, for a quiet week-end. It is a favourite sketching ground for architects and is one of the few remaining examples in England where practically every house is still a half-timber building in its original medieval form.

It is a delightful experience to wander down the twisting old streets observing the varying forms of Tudor and Elizabethan designs with their differing roof levels and dormer windows, one house projecting a little, another recessed. And there is a lesson to be learned by our modern town planners and builders of the New Towns such as Basildon and the recently conceived Thetford. There is a harmony at Lavenham in spite of the variety of elevational treatment, and there is a complete lack of monotony, partly achieved by the linking of one building to another and occasional archways or breaks-through to what were stable yards. This can be carried out today by means of terracing two or three types of dwelling house, bungalows, two-storey houses and three-storey flats. One obvious example springs to mind—the very successful housing scheme by Messrs. Tayler and Green, at Loddon, in Norfolk.

But whilst I was wandering and looking for sketching subjects, I felt that something was not quite right with Lavenham—there was a difference since my last visit five or six years ago. What was it? The answer gradually dawned on me—Lavenham was becoming 'precious,' becoming too much the show place; it did not ring true all the time and I could see why. That perhaps well-meaning but dangerous person the speculative builder was at work and also, just as dangerous, the enthusiastic amateur architect and archaeologist with only half knowledge and half good taste. In a word—Lavenham is in the hands of 'the strippers and the restorers.'

The strippers are those who maintain that because a building once had its timber frame exposed and open to the elements, the lath-and-plaster covering that was later put over it must be removed completely and the sooner the better. No matter what good reasons dictated the covering of the timber frame or how old the covering was, it must come off again. It is a veritable strip-tease act.

The restorers are replacing 18th-century sash windows with copy book casements and lead lights, preferably diamond shaped and the more green bottle ends imitating the original crown glass the better. They are also adding 'dear little bits' of wrought-iron brackets holding ships' lanterns or carriage lamps that never adorned a building in their lives except in the imagination of romantic ignoramuses. In one building the first-floor joist ends projecting over the ground-floor rooms were refaced with 1¼in.

Drawn by J. Fletcher Watson

Drawn by J. Fletcher Watson

(Left) Sketch of mixed group of buildings in High-street, showing sash windows added in the 18th century. These should not be changed for casements and it might have been better if the lath and plaster had been left covering the half-timbered work. Note how the cottages with rendered walls mix perfectly well with those with exposed timbers. (Right) This house in High-street has all its external walls plastered. Timber framing certainly exists behind, but why expose it?

By courtesy of Miss F. L. Ranson

Narrow-fronted house in High-street. 'Restoration' carried out to ground-floor windows and door. The window arches are not *original or correct nor are the diamond lead lights*

vertical boards of entirely the wrong proportion, that no medieval floor beam ever had. The experienced eye notices these things and the building immediately becomes bogus.

I was informed by a local inhabitant that some plaster was recently removed that actually included decorative panels of considerable merit of the 17th century, but the 'olde oak beams' had to be revealed!

I do not propose to go into the whys and wherefores of half-timber building preservation. Very good reasons existed for plastering over timber framing, and very difficult problems often arise when the frames are exposed after centuries of being covered up. Many readers will know all about these things and the SPAB have published excellent information on the subject. What I do wish to do is to draw attention to the fact that Lavenham does not appear to be in safe hands in this 20th century.

Do we want to see this wonderful old 15th-century weaving town go the way of Broadway which has been largely spoilt owing to 'preservation' of the wrong type? Do we want it to become a 'stockbroker tudor' village?

There is, I understand, an institution called the 'Lavenham Trust.' Whether there are any architect or archaeologist members on it I do not know; it is possible there are, but they have no power to act. What one would like to see—and quickly—is the whole town taken under the wing of the National Trust as at West Wycombe (half-timber and brick), or Lacock in Wiltshire (half-timber and stone).

The machinery for putting this into effect may be difficult and will have its financial problems but surely something can be done before it is too late. It is almost too late now. One group of half-timber cottages in Water-street is already 80 per cent converted into a café with doubtful taste, and a notice in a window of a 17th-century house reads 'When the restorations are completed, the owner will be prepared to consider offers for this property of outstanding character.' Will the character still be outstanding, I wonder?

I spoke to an old couple in a leaning house in the High-street who said: 'It's too cold and big for us now the children are grown up. We shall soon be going and then they will restore it, we are told, and let it for a big rent or sell it.' One learns to dread that word 'restore.'

I venture to suggest that there are now quite enough exposed half-timber medieval buildings in Lavenham, and the few rendered-faced houses and cottages could well remain and be repaired and distempered in various colours giving happy contrast to their oak-beamed neighbours

SOCIETIES

W. YORKS ARCHITECTS

'Whole Set-up of Building' Criticised

THE SPEED of building, some borough surveyors and West Riding building owners who go south for architectural advice, were criticised by MR. J. C. BIDGOOD, MP, speaking in Leeds on December 6 at the dinner and ball of the West Yorkshire Society of Architects.

He said: 'It is not a criticism of the architectural profession as such, it is a criticism of the whole set-up of the building industry and every allied trade and profession. It sometimes appals me that the speed of construction of building in this country is so pathetically slow.'

Continuing, Mr. Bidgood said that there were borough surveyors who had come to look on themselves as dictators. It was quite wrong that the man who paid for the job, who through his architect was wanting to express his individuality in a building, was held to ransom by some petty official who said: 'unless you alter this elevation to suit my own requirements then your plans will not be passed.'

He said it also disturbed him to see the increasing tendency on the part of prospective building owners in this country to appoint architects in the south of England. This was a retrograde step. They had the architectural ability to carry out the largest scheme in the West Riding.

IAAS

Annual Meeting of London and Home Counties Branch

THE annual general meeting of the London and Home Counties Branch of the Incorporated Association of Architects and Surveyors took place at Headquarters, 29, Belgrave-square, London, SW1, on November 29. The chairman of the branch, Mr. G. R. C. Aylward, FIAS, presided; amongst those present were Lieut.-Col. A. E. Henson, TD, FRIBA (immediate past president of the Association) and Mr. F. J. Meekins, FIAS, FIArb (senior vice president).

The reports and accounts were duly approved and adopted. Mr. D. P. Bowl was elected branch hon. secretary in succession to Mr. W. W. Green, and Mr. W. C. Casse was re-elected hon. treasurer. The following were elected members of the branch committee for the ensuing year: Messrs. G. R. C. Aylward, A. H. Berry, C. W. Bisping, A. R. Clarkson, H. R. Ewence, L. Harris-Marshall, L. W. C. Russell and I. J. Swain.

At a committee meeting held during the adjournment, Mr. G. R. C. Aylward and Mr. C. W. Bisping were re-elected chairman and vice-chairman respectively.

LEEDS SCHOOL OF ARCHITECTURE

Annual Diploma Presentation

LEEDS School of Architecture and Town Planning held their annual presentation of diplomas at Leeds City Art Gallery on November 30, which was also the day of the opening of their annual exhibition.

SIR ALFRED BOSSOM, MP, FRIBA, told the students that architecture would be even more important in the future than the past. There would be opportunities he never had, but hard work would be required. Although our architects, mechanics and builders were as good as anywhere in the world, other countries using other methods got better results.

He said a new 30-storey building in London was going to take three to four years to build, but in New York they had just completed a 44-storey building in eight months.

Sir Alfred also said that architects should know how to make out a time and progress schedule; there should be preparation of site plans in advance, and a knowledge of the problems before they were undertaken, and builders should build as dry as possible. He added that jobs should be paid for as they were done.

MR. F. CHIPPINDALE, FRIBA, head of the school, stated in his report that a variation in teaching methods next term would enable well-known architects to come into the school as instructors on subjects of their own choosing.

'This is the fourth time I've been pushed around the Artillery Memorial!'

PORTE COCHÈRE at the Savoy Hotel, London, WC2

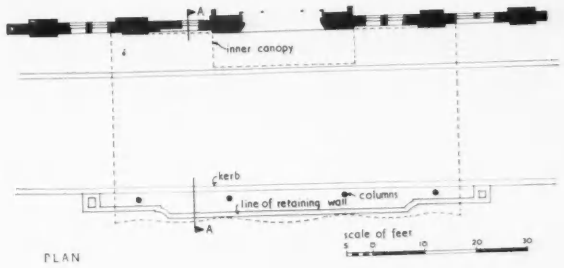
The inner canopy and the entrance doors. below: As seen from the Embankment Gardens

Architect : ERIC JANES, ARIBA

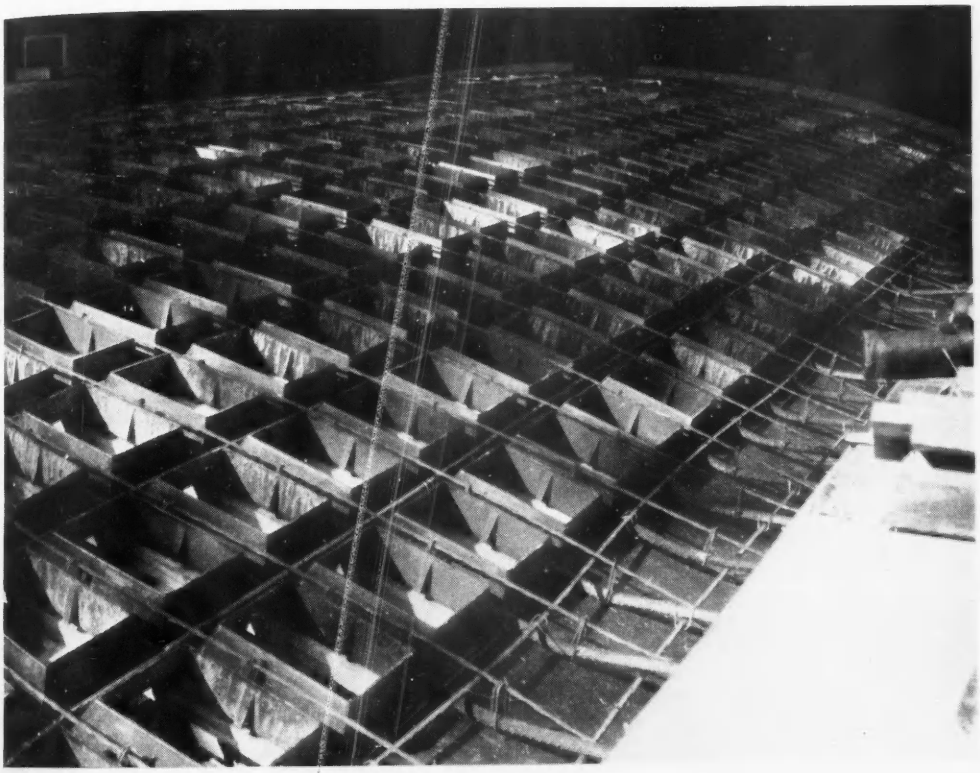
General Contractors : BEAUFORT CONSTRUCTION, Ltd.

Specialist Contractors : LENSCRETE, Ltd.

Porte Cochère at the Savoy Hotel



PLAN

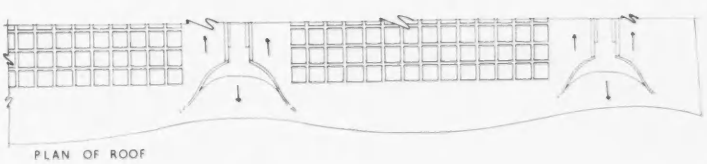


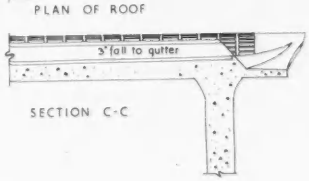
The cast-iron pots and reinforcing in position before the cement was poured

PRIOR to the erection of the new Porte Cochère, the entrance from the embankment provided only limited cover to arriving guests, by means of a small glazed canopy. Apart from normal hotel use, this entrance is subject to heavy peak loading, being the primary entrance for banquets, receptions and other functions taking place in the Savoy. The basic problem was, therefore, to provide complete cover for guests arriving and leaving in large numbers, enabling the carriage attendants to deal with at least five cars simultaneously.

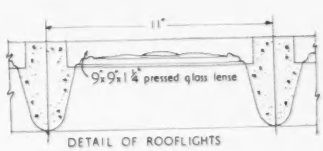
The original conception was that of a canopy but, due to statutory restrictions in the projection of canopies and the open aspect of the entrance, it was thought that a canopy in the usual sense could never be fully satisfactory and that the only real

SECTION B-B

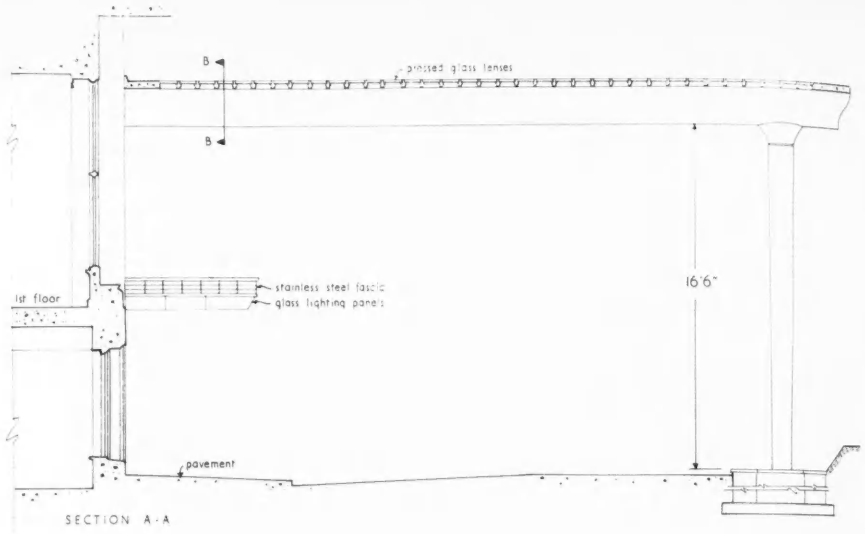

PLAN OF ROOF



SECTION C-C



DETAIL OF ROOFLIGHTS



Porte Cochère at the Savoy Hotel

solution would be the erection of a Porte Cochère. It was appreciated that this proposal would entail negotiating with the London County Council an easement of support from the Embankment Gardens. It was obvious that the development of this entrance would relieve congestion at the Strand entrance and the opinion was formed that, on these grounds, the London County Council might give sympathetic consideration to the scheme. This, in fact, proved to be the case.

It was decided to use light reinforced concrete in conjunction with standard glass lenses. Maximum light would be required under the Porte Cochère but there would be potential danger to any form of glazing from the possibility of objects falling from the windows of the hotel. It was thought best not to attempt conformity in any way with the main façade. Contrast was therefore needed and it was decided to use a gentle curving form of glass and concrete.

Tree roots in the Embankment Gardens were troublesome, but these were dealt with as shown

Subcontractors & Suppliers:—

'Granitex' finish to columns, S. Towers & Son, Ltd.; *inner canopy (structural steelwork)*, Smith Walker, Ltd.; *decorative stainless steel cladding and lettering*, John Brown, Ltd.; *lighting (design)*, Philips Electrical; *(installation)*, T. Clarke & Co., Ltd.

BOOKS

∴ Books reviewed in these columns may be obtained on application to the Book Dept., 'The Builder,' 4, Catherine-street, Aldwych, WC2. Cash (which should include 1s. to cover postage and packing) should accompany the order.

PIONEER OF SOCIOLOGY. THE LIFE AND LETTERS OF PATRICK GEDDES. By Philip Mairet. (London: Lund Humphries.) Price 21s. net.

THIS is the third biographical study of Patrick Geddes, the first, by Amelia Defries, 'Geddes the Interpreter,' having appeared in 1928 while he was still alive and the second, by Philip Boardman, 'Patrick Geddes: Maker of the Future,' in 1945, some thirteen years after his death. There are good reasons for a new biography, notably the letters and other material that have since become available and the growing interest in his teaching by students and practitioners of town planning. Geddes's stature, indeed, increases with the passage of time, not so much because of his three-dimensional achievements, which were incommensurate with his abilities, but because of the originality and fundamental soundness of his methods.

Geddes (who was born at Ballater on the Dee in 1845 and died at Montpellier in 1932) early in life showed the courage and independence that were to be the outstanding characteristics of his career. Leaving Perth Academy at the age of 17 he had a spell of work in banking, but soon decided that a business career was not for him. His chief interest was biology, and after a visit to Mexico to collect biological specimens, in 1874 he entered the Department of Botany at Edinburgh University, but, finding an 'irreconcilable conflict between his scientific idealism and the current methods of academic instruction' (to quote Mr. Mairet), returned home after a week. He never took a degree. His disregard for academic susceptibilities was to have unhappy consequences later, notably in the refusal by the University of a professorship and even of an LL.D, earnestly pressed for by his friends. However, after study in London under Huxley and Darwin, and in Paris, under Lacaze-Duthiers, where contact with the work of Comte and Le Play aroused his incipient interest in sociology, he returned to Edinburgh as a demonstrator of botany and lecturer on zoology, and later accepted the Professorship of Botany at Dundee, an appointment that he was to hold for 30 years —one that fitted in well with his other activities, since the classes met only in the summer months.

It was residence in Edinburgh that made Geddes a sociologist. 'The historic city,' writes Mr. Mairet, 'had declined into a collection of famous monuments surviving in an insanitary slumland of high tenements, filled floor upon floor with impoverished humanity, whose rent payments helped to maintain the comfortable citizenry on the other side of Princes Street. The new demonstrator in zoology was hardly installed in office before he began exploring the maze of squalor and misery with the curiosity of a social scientist, rapidly kindling into the humanitarian zeal of the reformer.'

Geddes not only explored, he acted. In 1887 he and his wife (he had just married) removed to 6, James Court, where they rented a floor two storeys up in a tenement not far from the Castle Gate. With the help of friends he showed what could be done to rehabilitate the 'Historic Mile' by acquiring and reconditioning some of the old property, and here he founded the Outlook Tower, which was to become a famous centre for sociological research. From this comparatively small beginning stemmed all his great work for town planning, and, indeed, for humanity at large.

Mr. Mairet traces his subsequent career in a narrative of deep interest—recalls its hopes and disappointments, its successes and failures—his work in Cyprus, his travels and lecturings in Britain, on the Continent and in the USA; his foundation of the International School at the Paris Exhibition of 1900; his University and home life; his work in London and at Dunfermline; the growth of the town planning movement, culminating in the Town Planning Act of 1909 and the International Town Planning Congress in London in 1910; his work in India; the death of his son Alasdair in France in 1916, followed soon after by that of his beloved wife in India, appalling blows from the shock of which he sought relief in intensified activity; his work in Jerusalem in association with his son-in-law (Sir) Frank Mears, who designed the magnificent Hebrew University, only a small part of which, unhappily, has been built; his knighthood (an honour he had earlier declined); his sudden death in 1932 at Montpellier at the *Collège des Ecossais* he had founded; and his cremation at Marseilles.

It is not perhaps surprising that Geddes, with his powerful personality, his disdain for academic and professional distinctions, his burning enthusiasm for urban improvement and social reform, should have become something of a controversial figure. Even some of his warmest admirers were puzzled by his generalisations about 'globalism' and 'grasping life as a whole'; irritated (or amused) by his fondness for coining high-sounding neologisms ('conurbation' was one which has found a permanent place in the language); or baffled by his complicated 'Chart of Life' (reproduced as end-papers to this book). Some of his best friends and disciples found his conversation difficult. C. R. Ashbee, who worked with him in Jerusalem, wrote: 'His talk is wonderful when you can follow it, for the ideas tumble out so fast that they trip each other up, and at times lose themselves in his fuzzy beard before they have a chance to seminate.' Lewis Mumford, who acted as his agent and partly as a secretary during his visit to the United States in 1923, confessed that the close collaboration they had both been looking forward to did not materialise. 'Mumford,' says Mr. Mairet, 'found that he could not bear being talked to for hours at a time.'

On the other hand, some found him irresistible. The late Sir Patrick Abercrombie, after describing the Edinburgh Room at the 1910 Town Planning Exhibition at the Royal Academy as 'a torture chamber to those simple souls that had been ravished by the glorious perspectives, or heartened by the simple villages, shown in those other ample galleries . . .' added: 'But if they chanced within the range of Geddes's talk, henceforth nothing would medicine them to that sweet sleep which yesterday they knew. . . .' Sir George Pepler has written: 'To one of necessity immersed to a considerable extent in the machinery of planning, he was a source of continual refreshment, a constant reminder that the machine is of no value except as a means of facilitating the living of a full life by the greatest number.'

Perhaps the greatest tribute to his work, and the most convincing evidence of the respect and affection in which he was held by his professional contemporaries, was the spontaneous getting together in England, under the direction of H. V. Lanchester, assisted by Brandford, Unwin and Pepler, of another exhibition to replace that sunk by the German raider *Emden* in 1914 in the Indian Ocean, on its way to India, where Geddes was waiting to receive it. The new exhibition arrived in time for opening in the following January.

Sir William Holford, in the course of a Foreword to this book, puts the view of a distinguished planner of our time who did not know Geddes, when he writes: '. . . the further we move away from him the clearer stands the great scaffolding which he erected for others to climb on. It seems to me, as one of his latter-day disciples, that Geddes provided not only a ladder but a complete framework for his successors in the field of town and regional planning and development. . . . In catching up with our own future we shall be continually overtaking Geddes's past.'

The book has an introduction by Dr. Arthur Geddes, together with several illustrations, including two portraits of Patrick Geddes at the ages, respectively, of 25 and 44, a sketch of the Outlook Tower, Edinburgh, a perspective drawing of Sir Frank Mears's design for the Hebrew University, Jerusalem, and a photo of the *Collège des Ecossais*, Montpellier. Mr. Philip Mairet is to be congratulated on a work of absorbing and abiding interest.

PREFABRICATING HOUSES FROM COMPONENT PARTS. By Norman Cherner. A Reinhold Book. (London: Chapman and Hall.) Price 64s. net.

IN the United States, where the average income is about $3,000 a year, there is a great demand for small houses costing about $6,000 each. Many types of prefabricated houses of about 500 sq. ft. are available at about that price, providing the somewhat inadequate accommodation of a living-dining area with two small bedrooms off a tiny central hall. Mr. Norman Cherner, after an extensive exploration of the subject, became convinced that a larger, better and more presentable house could be built for the same price, with provision for satisfactory later extension, if desired. He takes five basic types of structural systems, the components of which are readily available, and embodies these in 15 designs, illustrated by plans, elevations, other technical drawings and photographs and accompanied by descriptive notes. Each house is of about 700 sq. ft., and capable of expansion to over 1,000 sq. ft. In the second part of the book he illustrates and discusses in detail a great variety of materials, components and building methods.

G. J. HOWLING.

DEPARTMENT STORE
BRISTOL
for Lewis's, Ltd.

The Haymarket facade

Architects : SIR PERCY THOMAS & Son
NORMAN THOMAS, ARIBA, & W. G. SWEET, ARIBA, Partners in charge
A. PONIATOWSKI, ARIBA, Architect in charge
J. A. DUNNING, ARIBA, Assistant architect

Structural engineer : W. JONES, MIStructE

Engineering services : O. C. WAYGOOD, MIEE

Landscape : SUDELL & WATERS, FILA, ARIBA

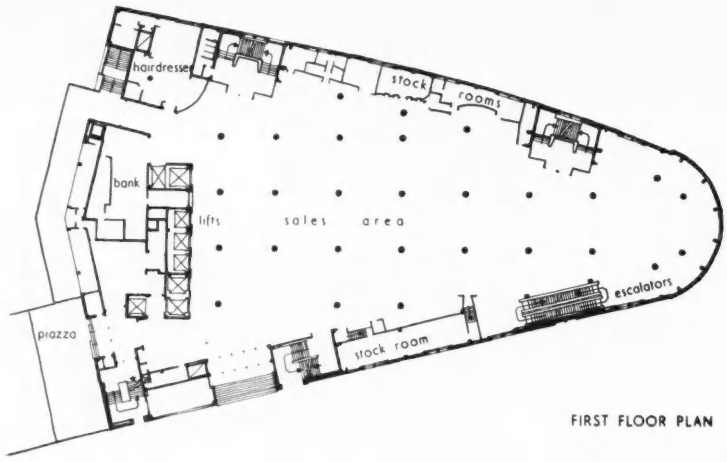
Quantity surveyors : W. T. HILLS & Co.

Builder : JOHN MORGAN (Builders), Ltd.

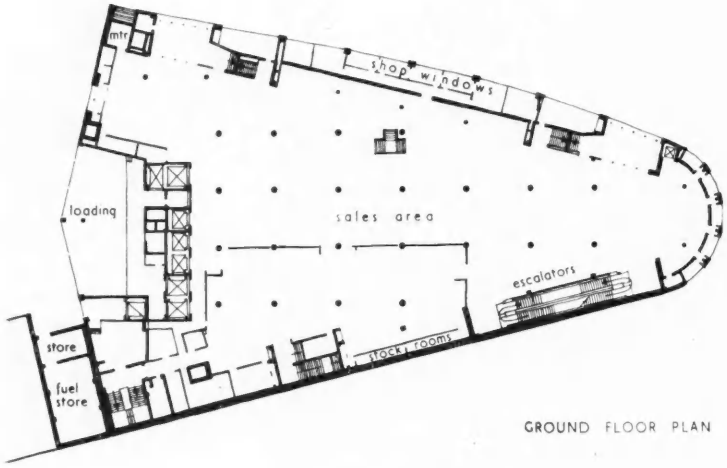
Department Store Bristol

above : *A ground-floor entrance and the mezzanine floor over the shop windows.*
right : *A typical staircase and*
below : *The restaurant foyer.*

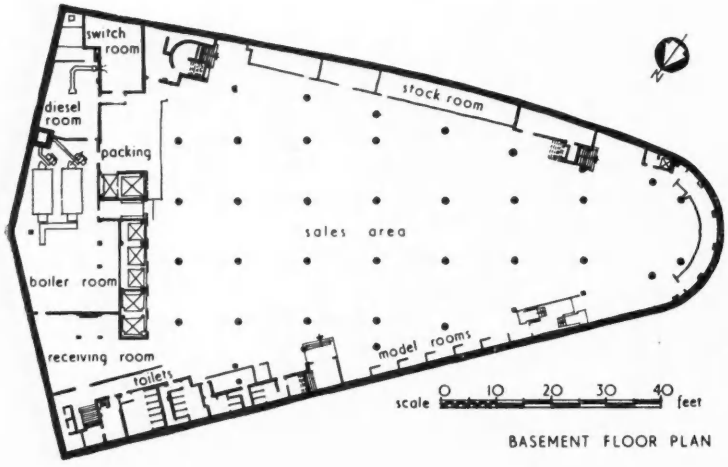
Department Store Bristol



FIRST FLOOR PLAN



GROUND FLOOR PLAN



BASEMENT FLOOR PLAN

THE building consists of a steel-framed structure comprising part basement, ground, small mezzanine, first, second, third, fourth, fifth and sixth floors. Part of the sixth floor is open roof garden with a tea room and servery. At seventh floor is the housing for ventilation plant, lift motor rooms and other services, water-storage tanks, sprinkler pressure tank, etc.

The gross area of the site within the building line is approximately 36,000 sq. ft. thus providing a total gross floor area of approximately 300,000 sq. ft. on a'l floors. The main façade on the Haymarket front rises some 87 ft. above the pavement at which level there is a set-back of 4 ft. From this point the top storey rises a further 25 ft. to the highest section at the east end of the building. The main north and south fronts are 260 ft. long with a bull-nose of 34 ft. 8 ins. radius at the west end and a frontage of 195 ft. to the service court at the east end. The south façade follows a radius of 772 ft. to follow the road adjoining.

Access to the store is at two levels, to the ground floor on the Horsefair and to the first floor on the Haymarket. Show-windows occupy approximately 180 ft. run of frontage to Horsefair, 50 ft. run around the bull-nose and 108 ft. run on the Inner Circuit Road. Occasional show-windows are also sited on a walkway from the Haymarket to the Horsefair.

To protect the basements from water in the ground, asphalt is applied to the under-side and outside of the floor and walls built against the rock. The weights carried by the columns place such a heavy strain on their bases that a special type of asphalt was used. Otherwise this material might tend to squeeze and allow the structure to settle.

The superstructure consists of a structural steel frame, entirely cased in concrete to a minimum thickness of 2 ins. as a protection against the effects of fire. The external walls consist of panels supported on the framework, 13½ ins. thick, generally of natural Portland stone with a brick backing. From pavement up to first floor level the 13½ ins. brickwork has a

facing of slabs of Travertine marble.

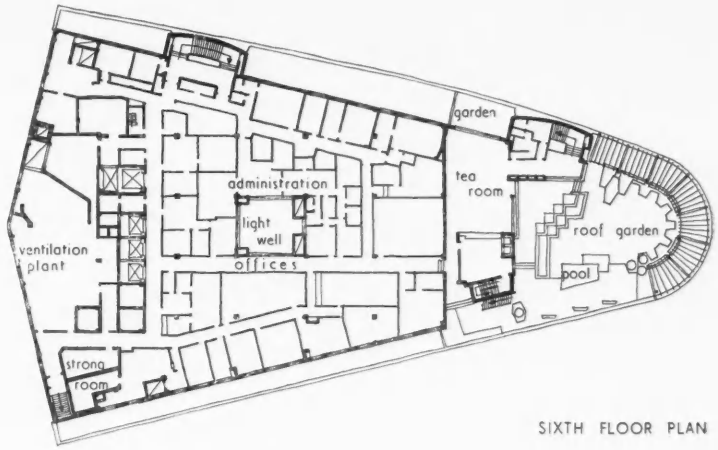
The floors are constructed of precast reinforced concrete units which rest on the steel frame. On the floors to ground and first these are prestressed, allowing the slabs to carry over 25 ft. spans and thus allow clear spaces above the suspended ceilings for services, and, in the case of the basement and ground the plenum ventilation system. The floor finishes will vary as required by the various selling areas. The structural bays of the building are 30 ft. and 25 ft.

The building is equipped with 48 ins. wide escalators, both up and down from all floors up to fourth. These are in one bank in scissors formation. In addition there are three passenger lifts and four service lifts. A fifth service lift is exclusively for carrying food. A water sprinkler system protects the entire building from fire.

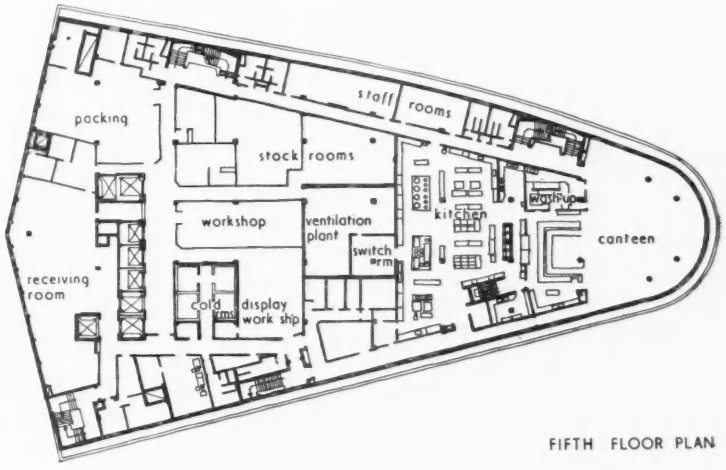
Pedestrian traffic is served by three main staircases with a separate stair for staff and service purposes. There is a restaurant and a cafeteria with their servery on the fourth floor and the kitchens and staff canteen are on the fifth. The restaurant is situated in the bull-nose where the large window area gives a fine prospect over the city. The sixth floor consists of the administrative offices and here too are situated the staff training and welfare sections. The latter has its treatment and rest rooms and offices for nurses and doctor. The managerial suite is also at this level whilst at the bull-nose end of the building is situated the roof garden with its tea room from which an external staircase leads to a terrace on the roof at high level and an observation platform. From this advantage point customers may see the complete panorama of Bristol and its surroundings.

The layout of the sales floors and the design of the fittings together with certain departments such as the ladies' and children's hairdressing, men's hairdressing and the food sales department was carried out by Mr. R. L. Heath, LRIBA, the house architect for Messrs. Selfridges, Ltd., in consultation with the architects.

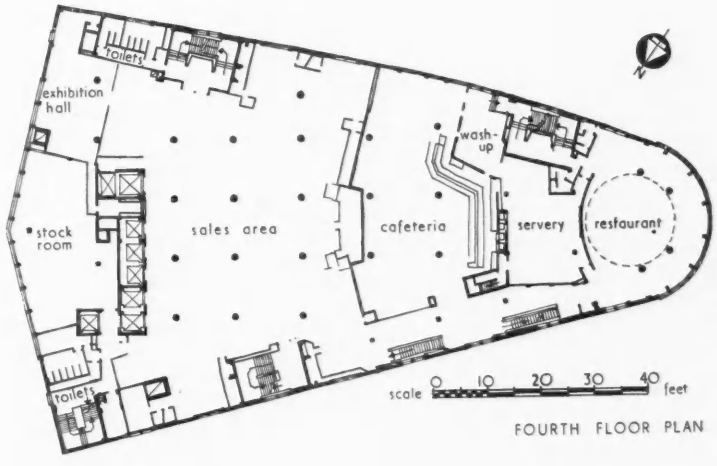
Department Store Bristol



SIXTH FLOOR PLAN



FIFTH FLOOR PLAN

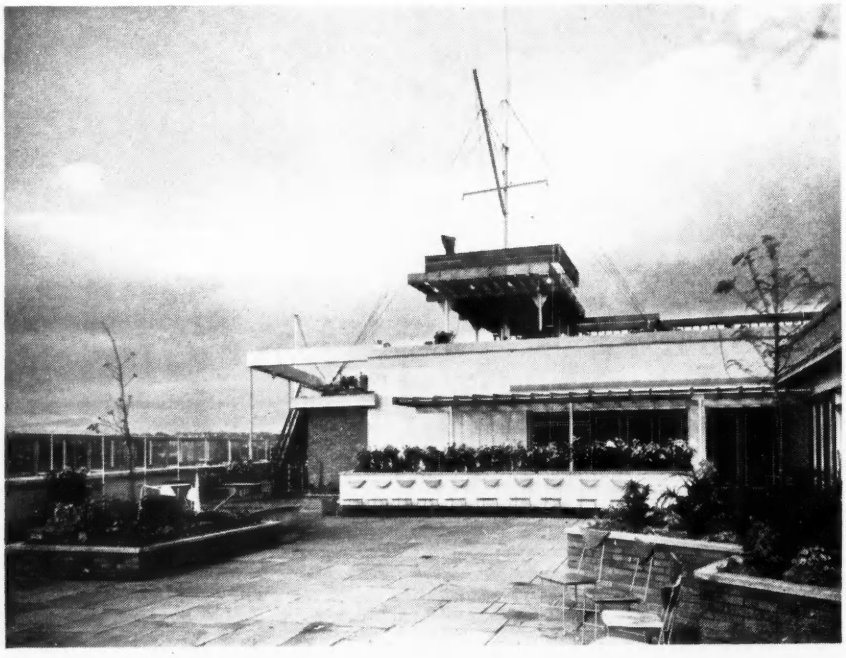


FOURTH FLOOR PLAN

The ' Pageant ' restaurant. Mural by Mary Adshead

Department Store Bristol

The roof garden and ' lookout '



Subcontractors :

Asphalt & roof paving, Asphalte Specialists, Ltd.; *suspended ceilings and asbestos spray*, John Bland & Co., Ltd.; *Portland stone*, Bath & Portland Stone Firms, Ltd.; *plain wall and floor tiling*, Bristol Art Floors, Ltd.; *patterned wall tiling*, Carter & Co., Ltd.; *lightweight screeds*, Celcon, Ltd.; *strong rooms*, Chatwood Milner, Ltd.; *precast concrete floor units*, Concrete, Ltd.; *metal windows*, The Crittall Manufacturing Co. Ltd.; *fireproof doors*, Durasteel, Ltd.; *cement glaze*, John Ellis & Sons, Ltd., Quickset Water Sealers, Ltd.; *reconstructed stone*, Empire Stone Co., Ltd.; *lightning conductors*, W. J. Furse & Co., Ltd.; *balustrades & bronze screens*, Gardiner, Sons & Co., Ltd.; *rolling shutters*, R. S. Haskins, Ltd.; *glazing and mirrors*, John Hall & Sons, Ltd.; *general joinery*, E. J. Harris & Sons, Ltd.; *air-tight doors*, Henry Hope, Ltd.; *hardwood floors*, Horsley, Smith & Co., Ltd.; *external marble*, Walter W. Jenkins & Co., Ltd.; *rooflights*, J. A. King & Co., Ltd.; *linoleum flooring*, Korkoid Decorative Floors, Ltd.; *structural steelwork*, John Lysaght, Ltd.; *terrazzo & granolithic paving*, Marble Mosaic Co., Ltd.; *fibrous plaster*, H. H. Martyn & Co., Ltd.; *painting*, W. J. Naylor & Co., Ltd.; *panelling & fittings*, George Parnall & Co., Ltd.; *library*, Bath Cabinet Makers, Ltd.; *flag masts*, Piggott Bros., & Co., Ltd.; *plastering and screeds*, Pollock Bros., Ltd.; *panelling to escalators, show windows & canopies*, Fredk. Sage & Co.; *Colterro & expanded metal suspended ceilings*, Scaffolding (Great Britain), Ltd.; *plumbing & gas services*, Arthur Scull & Son, Ltd.; *faience*, Shaws Glazed Brick Co., Ltd.; *internal doors*, Veneercraft, Ltd.; *illuminated sign*, Ward & Co., Ltd.; *metal screens*, John Williams & Sons (Cardiff), Ltd.; *venetian blinds*, John Wood & Sons (Bristol), Ltd.; *tea room & roof garden (separate contract)*, J. Burley & Sons, Ltd.

Suppliers :

Soap dispensers, Bersel Manufacturing Co., Ltd.; *duct & manhole covers*, Broad & Co., Ltd.; *floor tiles*, Carter & Co., Ltd., Tondu Flooring Tile Co., Ltd.; *roof ventilators*, Colt Ventilation, Ltd.; *paints*, Colthurst & Harding Co., Ltd., Imperial Chemical Industries, Ltd.; *bronze nameplates & decorative hooks*, Comyn Ching & Co. (London), Ltd.; *sanitary fittings*, Doulton & Co., Ltd., Henry Serventi, Ltd.; *electric fires*, Ferranti, Ltd.; *ironmongery & armourplate doors*, James Gibbons & Co., Ltd.; *sliding door gear*, P. C. Henderson, Ltd.; *rainwater heads & downpipes*, Walter MacFarlane & Co., Ltd.; *chimney insulation*, Moler Products, Ltd.; *glass domes*, Pilkington Bros., Ltd.; *rubber mats*, Redfern's Rubber Works, Ltd.; *bricks, buff facing* S.G.B. (Dudley), Ltd., *multi-coloured* Star Brick and Tile Co., Ltd., *commons* London Brick Co., Ltd. ; *plain wall tiles*, H. & C. Thyme, Ltd.

Engineering Subcontractors :

Heating & ventilation, Ashwell & Nesbit, Ltd., Frenger Ceilings, Ltd.; *switchgear*, Brush Electrical Co., Ltd., English Electric Co., Ltd.; *electrical installation*, Colston (Electrical) Co., Ltd.; *boilers*, Danks of Netherton, Ltd.; *diesel generators*, English Electric Co., Ltd.; *lifts*, Express Lift Co., Ltd.; *escalators*, J. & E. Hall, Ltd.; *ejector plant*, Hughes & Lancaster, Ltd.; *incinerator*, Incinerator Co., Ltd.; *parcel chute & conveyor*, Lamson Engineering Co., Ltd.; *sprinkler installation & hydrants*, Mather & Platt, Ltd.; *power operated doors*, G. D. Peters & Co., Ltd.; *switchgear*, A. Reyrolle & Co., Ltd.; *stillage lift dispenser*, Roll Race Conveyors, Ltd.

Work Outside the Main Contract :

Cooking equipment, Benham & Sons, Ltd.; *electrical lighting fittings*, Courtney Pope (Electrical), Ltd.; *shop fittings*, Courtney Pope, Ltd., Harris & Sheldon, Ltd., George Parnall & Co., Ltd., Fredk. Sage & Co., Ltd.; *office partitions*, Chatwood Milner, Ltd.

BUILDING FOR ATOMIC ENERGY

Discussion on Sir John Cockcroft's RIBA Paper

Extracts from the text of Sir John Cockcroft's paper on 'Architectural and Building Requirements as related to Atomic Energy,' read at the RIBA on December 10, with the President, Mr. K. M. B. Cross in the chair, were printed in our last issue. Now follow some points from the vote of thanks and discussion.

SIR CHARLES MOLE, KBE, MVO (F), Director-General, Ministry of Works, in proposing a vote of thanks to Sir John Cockcroft, said that 12 years ago, when he was one of a team who visited Harwell to determine whether it would be acceptable for development as a nuclear research establishment, he had realised that a challenge was to be made to the Ministry of Works and that it was up to them to meet that challenge in the best possible way. One readily saw that one of the fundamentals for success was to get a good team of architects and engineers—and indeed all the building professions—working side by side with the scientists, at the same time keeping a fluidity of organisation so that specific problems could be studied on the site and transmitted to Headquarters for further development. That pattern of staff distribution and general control continued up to the time of the formation of the Atomic Energy Authority when the Ministry of Works staff at Risley, some 300 strong, headed by Mr. Viney, were taken over to form the main core of the building organisation now operating from that centre today. The atomic energy work carried out by the Ministry amounted to about £100 million, and at one time there were over 1,000 staff engaged on this programme.

'Utmost Accuracy'

'As you may well imagine,' continued Sir Charles, 'the problems which we met with during this development period were varied, but always interesting. One of the first was to get as dense a material as possible around the reactors in the least thickness. The scientists used to bring along their instrument to find out not whether the concrete was strong enough but whether it was sufficiently dense to withstand the gamma rays, and I may say that we have had our anxious moments, particularly in one case where very special measures had to be taken to increase the density at certain points when the concrete was already in place! That was not at Harwell.

'The utmost accuracy had to be insisted on in many sections of the work. In the first pile of any size which we built about nine or ten years ago, the tolerances allowed in forming thousands of holes through 4-ft. thick concrete walls, to be sighted through from one side to the other—about 40 ft.—was just 2 thousandths of an inch, which was quite a precision job. The raising of thousands of tons of material and equipment to the top of the 400-ft. towers at Windscale for the additional filters was no mean structural achievement. It was quite an experience, instead of being hoisted up in a bucket or an erratic mechanical lift, to go to the top in a pukka lift on the outside of the chimneys and to look down from that height on the work which had been done.

'Over all this was the problem of letting literally hundreds of contracts for both the building and engineering work and keeping up the pressure to achieve a very tight programme. This meant that in addition to those in charge keeping a very close watch on the work an efficient progressing section had to be found. I can say quite definitely that without the interest and enthusiasm of the building and engineering contractors the problem would have been almost insoluble.

'From the core of experience which we gained on the first schemes and the pattern which was presented to other organisations, there has been a spread of knowledge so that the technique associated with building for atomic energy is now widely known, as evidenced by the groups set up for carrying out major schemes both here and in other countries.'

MR. T. L. VINEY (*F*), Department of Atomic Energy, Risley, in seconding the vote of thanks, wondered if architects knew much about nuclear energy, though he did feel that the treatment of the present CEA nuclear power stations showed the right trend. The architectural profession had allowed 12 years to pass since the advent of atomic energy in this country before inviting Sir John Cockcroft to speak on this subject.

'It should be possible for the physicist, the engineer and the architect,' added Mr. Viney, 'to work side by side to ensure that the composition as a whole is correctly interpreted, and I offer to architects the thought that a new conception must be introduced into their creative work, namely, the housing of plant. The physicist and the engineer rightly say that it is up to the architect to frame plant to display its virtues, not to conceal them.'

Outside Appearance

SIR JOSIAH H. ECCLES, CBE, then showed some slides of existing and proposed installations. Prefacing these he said that whilst it was true that the engineer and physicist must have their way in designing the plant, unfortunately for the person who had the overall responsibility, the ordinary layman who saw the structures usually only saw them from the outside. 'Consequently it is of extreme importance that whilst they are suitable for their purpose they should be æsthetically acceptable in their surroundings. I should like to express the hope that there will be continued and close co-operation between the three branches of science or technology engaged in this process.' Sir Josiah concluded by saying: 'The only other comment I would make is with regard to the figure Sir John quoted of 120 million tons of coal equivalent, which will be the additional requirement by 1975. I think some of our prophets have been rather mesmerised by the rate of energy usage since the war. First, we must remember that we ended the war without a substantial deficit in our energy usage, and had we been in a sellers' market with unlimited reconstruction I think myself that the rate of productivity represented by 120 million tons of additional fuel equivalent by 1975 is somewhat outside our reach, particularly if we can prove the value of the use of atomic energy. I should like to make an appeal to my audience to do what they can to create buildings which will not be chimneys or radiators. Apart from the æsthetic value of your work I think probably the second most important aspect is to provide structures which will conserve heat and energy and so rather falsify Sir John's pessimistic statement.'

PROFESSOR SIR WILLIAM HOLFORD said that two points particularly struck him—the first being that Sir John, head of an enormous establishment, had taken the trouble to write a programme. That was, he thought, a most essential point in our future progress in the field of atomic energy.

Hints of Things to Come

'The second thing is visionary, and I am very excited by the possibilities for the future,' Sir William continued. 'Clearly there is very little of the work of art about our present layout in connection with atomic energy. I do not say that the layouts are unpleasant or uncomfortable. Some of the housing and other units are extraordinarily good and fit for their purpose. But the whole thing, the unity, the work of art as we understand it, has of course still to be achieved, and it is not to be wondered at that that is so. All through the lecture and the slides there were these extraordinary hints of things that might be achieved and dreamed of by architects ever since the day of Homer.

'There is another point which interested me. Sir Josiah Eccles and Sir John Cockcroft talked of fitting these buildings into the landscape. There I would rather take issue with them. They remind me of those benevolent hosts who, when you are departing from Paris by air with a small suitcase, rush out with a case of brandy and say "Put this into your handbag." I do not think we can fit these buildings into the landscape. We must create them with a landscape of their own. If economics drive us to produce larger and larger units of generators, boilers and reactors I believe that we shall have to stop thinking of the problem as being an assault on the fair face of this tiny country, and think of it instead as being an enormous opportunity to create a greater and quite different amenity. I realise that this is something which I cannot speak about in three minutes, but I feel that, as architects, we have got to change our point of view. Instead of trying to minimise and reduce the effect we must grasp the totality of this problem and when we go into Wales, where we shall be going into new country, we must use all the devices of design, orderliness and landscape formation to create the landscape of the atomic age.'

MR. L. N. FRASER (Deputy Planning Adviser, Essex) spoke as one having something to do with the receiving end of a

power station coming into a rural area. The responsible local authorities in Essex, he said, were very pleased with the design at Bradwell, but he would like to mention another thing which had not had so much publicity—the fact that it was also necessary to have switch-gear stations and sub-stations. His question was: Why cannot some architectural treatment be given to switch-gear stations in the same way as these other buildings are being dealt with?

MR. JOHN WHITEHEAD (Stud., RIBA) said that he understood that the power stations had been designed for a life of 20 years and presumably, as was usual, they might be used for a little longer than that. 'I imagine (said the speaker) that they will not be used for very much longer because it will be like running vintage cars in that they will be inefficient compared with the new ones. The concrete is 11 ft. thick, and each reactor forms a cube of about 200 ft. each side, so they are enormous things and enormously permanent, and yet they are only designed for a life of 20 years. They will therefore stand for much more of their life as ruins than as power stations. That being so, I think that we should spend as much time thinking about how they will look as ruins as power stations!'

American Projects

Some of the American experimental ones, and some of the projects for experimental ones, had a lot of the plant right in the ground, including the pile, so that there would be a light building over it which could be demolished easily after the plant was finished with. 'I think that we in this country should try to do it in different ways. If the pile was placed in the ground it would be possible to use earth for biological shielding, which would save a tremendous amount of money. Each reactor weighs about 70,000 tons and quite a lot of that is concrete. If the amount of concrete could be cut down, and if the reactor could be lowered into the ground there would not be the problem of bearing stress.'

MR. J. F. MUNCE said that there had been a big change in the American scene, brought about by the fact that the American architect, in co-operation with the engineer, had taken the trouble to study the processes which took place in nuclear fission, with the result that he had been able to make his mark on the scene and had been able to persuade his engineering and chemical brethren that he was talking about something which he fully understood.

Responding to the vote of thanks, SIR JOHN COCKCROFT said that, according to Sir Josiah Eccles, the switch-gear was now being planned at the same time as the power stations. 'I fully agree with what was said about the importance of bringing in the architect from the beginning in new projects of this kind. When Sir Josiah spoke of landscape formation I was thinking about the same kind of thing when I was talking about fitting buildings into the landscape. Landscape formation is very important.

'A question was asked about whether or not power stations could be sunk into the ground. In Sweden they are.'

During the proceedings, a Diploma of Distinction in Town Planning was presented to Mr. A. G. Ling, BA(Arch.), FRIBA, MTPI (City Architect, Coventry).

SINGLE-STOREY HOUSE,

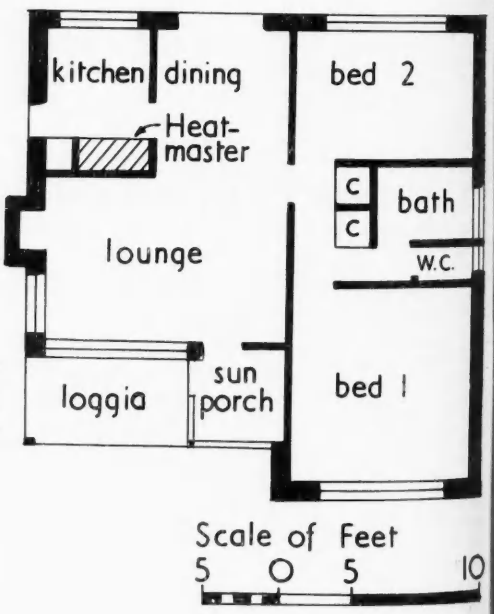
West Chiltingdon, Sussex; incorporating a complete heat service

Architect: PHILIP PICKERING, AIAA
Developers: GARLICK & RUSSELL, Ltd.
Heating Installation: RADIATION GROUP SALES, Ltd.

THIS two-bedroomed house, designed on a semi-open plan, is part of a small private estate development.

It is fitted with a Radiation 'Heatmaster' coke- or coal-burning unit which provides heat for cooking, hot water and warm-air house heating. The cooker has thermostatic control over a full range of oven temperatures and these are maintained regardless of other heating demands. Warm air from the unit flows through skirting level grilles to provide full central heating for the lounge and dining area. Room temperatures are selected at will by adjusting a wall-mounted thermostat.

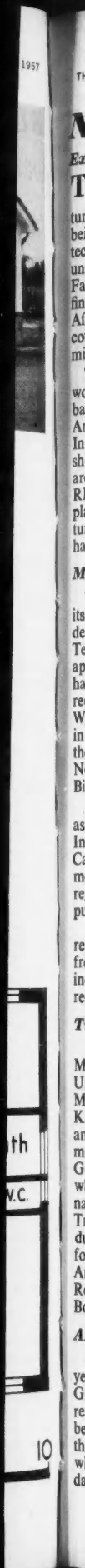
It is claimed that the running costs of this unit are usually half those of a similar conventional service.



GROUND PLAN

The 'Heatmaster' will heat up to 350 sq. ft. of floor-space, but in this plan the lounge and dining space only total approx. 300 sq. ft.

x ;



News of the Week

Exhibition of S. African Architecture

THE Royal Institute is to present an exhibition of South African architecture in April next year. The exhibition is being prepared by the Faculty of Architecture of the Witwatersrand University under the supervision of the Dean of the Faculty, Professor J. Fassler. It is being financed by the Department of External Affairs and will be brought to this country by the office of the High Commissioner for South Africa.

The exhibition aims to show the best work from all over the Union and has the backing of the Institute of South African Architects and the various provincial Institutes. This exhibition follows the showing of an exhibition of Australian architecture which was presented at the RIBA two years ago, and will take the place of the proposed Danish architectural exhibition which has unfortunately had to be cancelled.

MoW Information Service

THE MINISTRY OF WORKS has reviewed its Technical Information Service and has decided to abolish certain regional Technical Information Officer posts. The appointments at Newcastle and Nottingham have already been abolished in reorganisation of the regions concerned. Westmorland and Cumberland are now in the Manchester region and the rest of the Newcastle region comes under Leeds. Nottingham region is now part of the Birmingham region.

It has now been decided to discontinue as from January 1 next, the Technical Information Officer appointments at Cambridge, Reading and Bristol. Arrangements will be made to continue in these regions the exhibitions, films, lectures and publications of the service.

In consequence of these changes resources available in the Ministry for the free service to individual technical inquirers will in future be generally reduced.

Trade Commissioner to Canada

THE Board of Trade have appointed Mr. Kenneth McGregor, CMG, an Under-Secretary in their Industries and Manufactures Department, as the United Kingdom Senior Trade Commissioner and Economic Adviser to the High Commissioner in Canada in succession to Mr. Gordon Bowen, CMG. Mr. McGregor, who has been responsible for co-ordinating the arrangements for the Canadian Trade Mission to the UK, will take up duty in Ottawa next summer. He was formerly in charge of the North American Division of the Commercial Relations and Exports Department of the Board.

ABS Ball

PRELIMINARY figures show that this year's ABS Ball, which was held at Grosvenor House on December 11, resulted in a record sum of over £3,000 being raised, the extra money to produce this figure coming from the side shows, which also made the biggest profit to date. Detailed figures will be issued in due course. Opinion was unanimous by those in a position to make comparisons that the 1957 Ball was the best ever held, and the Ball Committee, under the chairmanship of Mr. C. J. Epril, FRIBA, and all who took a hand in the organisation of the event, are to be congratulated on their success.

This year's theme, 'It's all Greek,' was undoubtedly a gift to those responsible for the decorations, and a high level was attained in the execution and general colourfulness of the designs. The menu, too—always out of the general rut—was an entertainment in itself, and the numerous advertisers who support the charity in the main rose well to the occasion in the design of their advertisements. Theo Crosby's bold cover depicting a Greek sipping from a wine glass set just the right note for a convivial supper party.

Lest the object of the Ball be lost sight of in the merriment, a model and progress photographs of the ABS Old People's Homes, which are now under construction in Surrey, were on view at the entrance to the ballroom. The homes now being built will be ready for occupation early in the New Year. Ever since the scheme was first announced, applications have been coming in from would-be residents, and it will be no easy matter to decide who the lucky ones will be, Even more difficult, it is pointed out, will be the task of finding the money required for the running expenses. The encouraging response to the needs of the ABS shown in the generosity of architects and their guests at this year's Ball should hearten those responsible for this admirable charity.

Management Course

A COURSE on Architectural Project Management has been arranged by the York Institute of Architectural Study, Micklegate, York, for January 3-7 next. It is intended to fulfil the need for some form of post-graduate training in management for architects, surveyors, civil engineers and builders. Matters relating to all sizes of office, from the small private practice to the large municipal office will be discussed.

Among the subjects covered by the syllabus are: work programming and progressing, cost control, tenders and contracts, architects' and builders' relations, etc.

The course, which has received the support of the RIBA Practice Committee, will be held at the Institute. Details can be obtained from Mr. J. P. West-Taylor, MA, secretary.

Hong Kong Public Works

THE annual departmental report (1956-57) of the Director of Public Works, Hong Kong, describes briefly the work carried out by the various sub-departments and outlines the progress made on the major schemes in hand. During the year approximately $31,650,000 was spent on new work, including $12,475,000 on resettlement housing, and a further $5,351,000 on maintenance, alterations and additions to Government buildings, sites and installations. The report includes four pages of illustrations, the new central Government offices and the Argyle-street flats being of excellent architectural quality. Mr. J. Forbes, OBE, BSc, MICE, is the Acting Director of Public Works, and Mr. G. P. Norton, ARIBA, the Chief Architect. The report is published in Hong Kong, price $5.

President Installed

MR. D. E. WOODBINE-PARISH, FIOB, was installed as president of the Building Teachers' Conference for 1957-58 at the annual meeting held at 47, Bedford-square, WC1, on December 7.

'Story Behind a Tender'

THE BUILDING FIRM which co-operated with Mr. Aidan Crawley in the TV feature 'Adventure in Industry' on December 18 were Richard Costain, Ltd., and not as wrongly given in our issue of December 13. The theme of this BBC item was the process by which the firm built up the tender which they have put in for an extension to Malta Harbour. We hope to review the feature in a future issue.

Professional Announcements

MR. E. WAMSLEY LEWIS, FRIBA, chartered architect, has removed to offices at 12, Frederick-place (2nd floor), St. Thomas-street, Weymouth. Telephone: Weymouth 992.

MESSRS. BAKER, MALLETT AND PARTNERS, quantity surveyors, of Grosvenor-gardens House, SW1, have opened an office at Yorkshire Penny Bank Chambers, Wilson-st., Middlesbrough (tel.: Middlesbrough 3538), in the charge of MR. E. V. HALE, ARICS.

MESSRS. BANKS, WOOD AND PARTNERS, quantity surveyors, of Gloucester House, Charing Cross-road, WC2, are moving on January 1 next to 5-15 Cromer-st., Gray's Inn-road, WC1 (tel.: Terminus 7171/3), where they will be pleased to receive trade catalogues, etc.

COMING EVENT

THURSDAY, DECEMBER 19

THE PHYSICAL SOCIETY (Acoustics Group).—Paper on 'Sound Insulation,' by Mr. H. J. Purkis. Imperial College, Imperial College-rd., SW7. 6 p.m.

FROM 'THE BUILDER' OF 1857

Saturday, December 19, 1857

FROM BROMPTON TO BAYSWATER, VIA PARK-LANE.—The necessity of skirting round all Hyde-park from Brompton, Knightsbridge, Chelsea, etc., to reach Bayswater, and vice versa, either on foot by night or by vehicle at all times, is a great grievance of which we have often complained. The crossing of Hyde-park by a public road has been urged; but interference with the privacy and integrity of the park formed one main difficulty. To obviate this it has been proposed to sink the road below the level of the park. A matured plan has been laid before us by Mr. Risdon, of Bayswater, who proposes to open such a road along by the sunk wall of Kensington-gardens, from near Victoria-gate, and opposite Westbourne-street, to the present bridge across the Serpentine, close beside which it would pass by an additional bridge, whence it would run to the Kensington-road, a little to the east of Gore House, and opposite the new road leading to 'South Kensington' and the Art Museum.

Architect's Registration Council

103rd ORDINARY MEETING

THE 103rd ordinary meeting of the Architects' Registration Council of the United Kingdom was held at 66, Portland-place, W1, on December 13, with Mr. Howard V. Lobb as chairman.

Approval was given for admission to the register of 57 applicants, 51 of whom had qualified by examination under Section 6(1)(c) of the Principal Act and the remainder under Section 6(1)(d) of the Principal Act and under Regulation 26(a)(3), architects resigned—seeking re-admission. The committee recommended that 25 applicants be rejected.

The report of the Board of Architectural Education, which was adopted, recommended that the Panel of Examiners for the Maintenance Scholarships for 1958 be appointed as follows: Chairman, Mr. Martin S. Briggs; general knowledge, Mr. F. F. S. Bryson; mathematics, Dr. E. S. Martin; essays, Dr. G. I. Sinclair; drawing test and design test, Mr. Hubert Lidbetter.

The Board recommended that, as in 1957, an upper income limit of £2,250, with £300 allowance in respect of each dependant, excluding the candidate, be adopted in dealing with applications received for admission to the 1958 Maintenance Scholarships Examination.

It was reported by the Board that the tuition fees at the Architectural Association School of Architecture would be increased from £50 to £60 for each term, with effect from January 6, next. They recommended that the grant of one-third fees for ARCUK Maintenance scholars at the school be increased from £50 to £60.

The Board, it was stated, had been informed that the Council of the Royal Institute of British Architects had approved certain revisions to the syllabuses for the RIBA intermediate, final and special final examinations. In the case of the intermediate examinations these revisions will come into operation on November 1, 1960 and for the final and special final examinations on November 1, 1962. The main changes are concerned with some extension of the scope of the examination in the technologies in connection with building and with variations in the requirements relating to Testimonies of Study, particularly in regard to the final examination.

Members noted the appointment of Mr. B. J. Collins, FRICS, PTPI, as president of the Town Planning Institute in place of Mr. M. J. Hellier and the appointment of Mr. A. E. Gordon, FRIBA, by the Royal Incorporation of Architects in Scotland in place of Mr. John Watson, FRIBA, FRIAS.

A resolution was moved that the approval of HM Privy Council be sought to amend the list of examinations set out in Schedule 2 of the Council's Regulations, as follows: Delete 'Technical College, Cardiff' and substitute 'Welsh College of Advanced Technology.'

The report of the Finance and General Purposes Committee showed that the names of 89 persons were removed from the Register on November 4 for non-payment of the 1957 Retention Fee.

With regard to the representation of constituent bodies on the Council the following figures of membership were announced:

	No. of M'bers	*No. of Reps.*
Royal Institute of British Architects	14,099	29
Incorporated Association of Architects and Surveyors	733	2
Architectural Association	1,603	4
Faculty of Architects and Surveyors	177	1
Association of Building Technicians	352	1
Provincial Associations ..	550	2

It was reported by the Professional Purposes Committee that they had given further consideration to the views expressed in a memorandum by the chairman of the Discipline Committee on the application of the Code of Professional Conduct with special reference to Principle III, to architects practising in this country and seeking commissions abroad. The Committee recommended the Council not to amend or relax the enforcement of the Code in order to permit architects to advertise or solicit business abroad, but, having regard to the comments of the Council, suggested the following course of action:

(i) The constituent bodies to be informed that the Council are not prepared to amend or relax the enforcement of the Code in order to permit architects to advertise or solicit business abroad.

(ii) If a constituent body wishes to provide facilities for its members to obtain such business, the Council suggest that it arranges with the authority concerned to submit either a general or selected list of names of those of its members who are willing and ready to undertake work abroad.

(iii) The constituent bodies to be reminded that in many of the overseas countries from which such work would normally be forthcoming there may be architects already practising who are registered in this country and who are probably members of one or other of the constituent bodies.

CODE OF PRACTICE

British Standard for Domestic Propane-Gas-Burning Installations in Permanent Dwellings (CP338: 1957)

ALL the traditional and modern applications of gas-cooking, heating, lighting, refrigeration—can be 'on tap' where propane-gas-burning equipment is installed. But since it is most widely used in rural areas, and is completely self-contained, its installation must follow recognised good practice; the alternative is frequent breakdowns and vexing delays and possibly dangerous accumulations of gas, until expert assistance is available from the nearest town.

Hence the practical value of this Code which specifies materials and methods of installation for propane-gas-burning equipment, together with pipe sizes, jointings, layout, the number and location of containers, and details of inspection and testing. The Code applies to installations in permanent dwellings only. It does not deal with appliances; standards for these are under consideration.

Some of the subjects dealt with in the 35-page illustrated Code, price 7s. 6d., are:—*Design*—'Basic layout,' 'Siting of appliances' and 'Concealed pipework.'

Consumer Instructions—The clause summarises various safety precautions which should be among the printed instructions supplied to the consumer by the installing organisation.

Proximity of Services—This section includes a useful table showing the desirable relationship of various services one to another. For example, electricity ducts should not be run adjacent to cold water pipes, and so on.

Detailed methods of test are given in three appendices. The Code ends with eight full-page illustrations, one of which is a quick reference pipe-sizing chart.

Copies of this Code may be obtained from the British Standards Institution, Sales Branch, 2, Park-street, W1.

'A REAL TESTING TIME COMING'

President at LMBA Luncheon

MR. W. KIRBY LAING, president of the London Master Builders' Association, in a speech at the annual luncheon of the LMBA's Central Area No. 3, held at the Connaught Rooms, Great Queen-street, WC2, on December 11, said: 'During the past few months I have been accused of being an arch pessimist. Nevertheless, 1958, I believe, will be a real testing time in the building industry and we will undoubtedly be faced with a curtailment of activity, although how great this will be I cannot foresee at present.'

Continuing, he said that with this prospect ahead it was up to those in the industry to do their work as efficiently as possible in the period of severe competition which was coming. As to what could be done to improve matters, Mr. Laing stated 'There is no ready-made panacea for this. Each one should look into his own business and see where improvements can be made.'

One thing which would help the contractor was if he could be brought in on a job at a much earlier stage. The package deal was one way of accomplishing this, but there must be other ways. He appealed to designers to assist in this. 'The trade unions too can help a great deal,' he went on. 'But I must say that I feel they are making things a little difficult for us as a result of the wage claim now before the National Joint Council. Claims of that sort can have a very adverse effect on the industry.' Mr. Laing then called for a realistic attitude on the part of the unions in the negotiations.

The president was responding to a toast to the LMBA proposed by ADMIRAL HUGHES HALLETT, CB, DSO, RN, MP, who stated in his address, 'I wonder as a layman if people in your industry are not too slow in adopting modern techniques. I know that in fairness it must be said that by-laws and regulations are as much to blame for this attitude as are those engaged in the actual work.

'You belong to a unique industry. Only finance limits the amount of building done, but in spite of this there can be no doubt that there will be work for you to do as long as man exists upon the face of the earth.' The toast 'Our Guests' was proposed by MR. J. A. PORTER, senior vice-chairman of Central Area No. 3, to which MR. W. REEVE, Town Clerk of the Borough of Stepney, responded. Chairman for the luncheon was Mr. D. E. Richards, MIOB.

'BRIDGING THE GAPS'

Second Joint Symposium at Preston

From a Special Correspondent

FOLLOWING on the outstanding success of the joint symposium 'Gaps in Building Know-How' held last year and organised by the Preston, Blackburn and District Society of Architects, a second symposium was held at Alston Hall from December 6-8 in order further to develop a combined approach to the problems of the building industry. Some 67 members of the industry, representing architects, quantity surveyors and builders, joined forces to discuss and study solutions to their problems under the heading 'Bridging the Gaps.'

MR. TOM MELLOR, BArch, ARIBA, AMTPI, president of the architect hosts, in a brief opening address, spoke of the need for a 'fusion' of all parties in an endeavour to reduce the stresses in the building industry, and he briefly introduced the speakers, Mr. Wm. A. Allen, BArch, ARIBA, of the Building Research Station; Mr. Stirrat Johnson-Marshall, CBE, BArch, ARIBA; Mr. Howard A. Close, MA, contracts and legal adviser to the National Federation of Building Trades Employers; Mr. K. J. Speakman-Brown, FRICS, member of the RICS Quantity Surveyors' Committee; Mr. L. Statham, president of the NW Federation of Building Trades Employers; and Mr. Eric Bird, MBE, MC, ARIBA, of the Building Centre.

Work of the BRS

The first speaker, MR. ALLEN, opened with a brilliant talk and gave a brief outline of the organisation and purpose of the Building Research Station, whose main function, he explained, was primarily research, testing of materials being only secondary. The scientist's job as he saw it was one of 'rolling back the frontiers of knowledge.'

He went on to say that one of the problems confronting the architect was 'when to innovate and when not,' and the only person who had that right was one who understood the basic principles involved, which could only be determined by research. There was a real need for a fusion of the work of science, profession and industry.

Mr. Allen spoke of trial and error and conservatism, quoting the simple case of the rounded nosing to the treads of a staircase, and where, in an endeavour to be in the 'fashion,' the profile was abandoned with sometimes dangerous results. At the other end of the scale the case for 'curtain walling,' despite the many problems, was persevered with; in his opinion, timber was probably the best material because of its ability to move and slight absorbent quality, although it had its limitations on multiple storeyed buildings.

He said that there might be a need for some conservatism but often, of course, the opposite was true. He mentioned by-laws which laid down a prescribed type of foundation unrelated to its function, which led to many failures due to ground shrinkage but few to the loading. He then dropped a small 'bomb' by stating that the usually accepted coverage of steel reinforcement in external concrete (except factory-produced) of 1½ in. has proved to be quite inadequate and gave it a life of 25 years.

The problem of cost control was one on which he thought the builder could teach the architect quite a lot—simplicity and buildability and consistencies. Finally, he stated that there was no justification for making something that was not beautiful, and that the right sort of architect should design for the industry, and mentioned the deplorable standard of design in courses for building technicians. A discussion followed in which the need for common views and dangers of innovation and short-comings of education were touched upon.

Origin of 'The Gap'

MR. STIRRAT JOHNSON-MARSHALL, in an extremely interesting paper, spoke of the break in tradition brought about by the industrial revolution, which gave rise to a 'gap' between builder, architect and client; thus, in the 19th century the new big business man who made his money by hard bargaining, gave rise to competitive tendering and the need for the quantity surveyor. The craftsmen now found that they were not trained to cope with the 'architectural feeling' of the time, and what was now required was a system for overcoming this state of affairs — a combined team probably leading to a new vernacular of 'building grammar.'

He went on to speak of his part in a combined operation with an intelligent client, Building Research Station, architect, quantity surveyor and manufacturer in dealing with the huge problem in Hertfordshire of school places, and illustrated with a series of slides the excellent work carried out.

This work was in fact a combined operation to overcome real shortage of manpower, but because of standing orders and the need for competitive tendering excluded the builder. They therefore sought the services of the manufacturer to produce a simple unit which could be assembled for a multitude of purposes and various site conditions. He went on to stress the need for integration and a new approach to fill the 'gap,' emphasising the need for keeping a team together long enough to repeat the process of development, often learning the lessons of the past mistakes.

During the course of the discussion which followed, the possible dangers of integration and collaboration were pointed out—the small builder not having the facilities for collaboration and the 'big concern' with the facilities gaining a monopoly, the small builder being gradually squeezed out with a real loss to the community and the danger of losing individualism.

MR. H. A. CLOSE read a paper on the place of the lawyer in the team and his position in it to ensure that all parties were of one mind and to establish a procedure for dealing with disputes. He spoke of the long path leading to the present-day issue of the RIBA Form of Contract and gave figures to make the point of its general acceptance by all parties. Mr. Close mentioned some of the hazards of making amendments to this form of contract—which was a very good document—the pitfalls of such aspects as inserting in the contract document impracticable dates for completion and extensions of time; real care was needed if claims on both sides were to be avoided.

A further point dwelt upon was the real need for the architect to have all drawings and other details ready on time. The contractor was entitled to expect a reasonable standard of efficiency from the architect in this respect. A very lively discussion ensued and amongst the main points raised was a request from the builders that the quantity surveyor should insert in the bill of quantities the date of delivery on the job of such items as steel reinforcement, prefabricated units, and so on.

The day closed with a paper by MR. SPEAKMAN-BROWN, on 'Counting the Cost,' as it affects the building owner—the cost of the end product. He broke this down into several parts—cost of tender (which was affected by the tone of the market), tender date, type of contract, presentation of tender documents, and stated that low cost should not be confused with cheapness. On the further aspect 'Who counts the cost?' the speaker was of the firm opinion that by the very nature of the quantity surveyor's job he was the man best fitted to do this.

He mentioned the position of the local authority treasurer and auditor and his position in relation to the builder.

In conclusion, he stated that in his opinion the quantity surveyor should be a member of the team from the outset and that some builders made a point of adding or dropping 2½ per cent. on the reputations of the architect or quantity surveyor. Mr. Speakman-Brown then dealt at some length with 'How is the Cost Counted?' and covered this question under the headings of cost research, cost analyses, cost planning and final account.

A discussion followed which carried such diverse items as 'elemental bill'; the necessity to colour drawings, especially alterations, and the possible reduction in the tender figure by the issue at tender stage of all drawings, including a block plan.

The Builder's Side

The builder's side was delightfully presented by MR. STATHAM with a paper entitled 'Profit by Experience.' He thought that the operatives might have something to offer in bridging the gap, that a real attempt must be made to restore their confidence, and that a proper and prompt settlement of final accounts should be made. He dealt with his paper under several headings and made such points as: when will the client seek tenders from firms of equal

standing, and that probably the quantity surveyor should be made independent of the client; the possibility of restoring the 'hoisting of the flag' and the bonus for completion by a given date; the spreading of work so as to avoid the bad old days of the depression, making the fullest use of the capital available and the readiness of the building industry to accept alternative types of construction.

Finally, he posed the question 'How far have we failed to profit by experience?' and the important problem of taking steps to pass on knowledge to the youth of the industry and making use of such information as is published by the Ministry of Works and the Building Research Station.

MR. ALLEN asked that there should be a 'flow back' of information on faults from builders to architects generally.

MR. ALLPORT WILLIAMS said that in regard to the payment of final accounts the blame was to be shared, the builder often failing to produce the final account in order that payment could be made.

MR. ERIC BIRD gave a masterly summing-up of the papers and discussions and with commendable clarity emphasised the main features of this 'round the table' gathering. He called for a new gospel for the whole building industry.

Management in USA Building Industry

Mr. Peter Trench's Address to the Institute of Builders

A PAPER entitled 'Some Impressions of Management in the American Construction Industry' was given by MR. PETER TRENCH, OBE, FIOB, at a meeting of the Institute of Builders held at the RIBA, 66, Portland-place, W1, on November 20. The President of the Institute of Builders, Mr. H. S. Oddie, was in the chair, and at the conclusion of the meeting a vote of thanks to Mr. Trench was moved by Mr. P. F. H. Wykeham, V-PIOB. We take the following extracts from Mr. Trench's remarks:

Matter of Perspective

I do think that an attempt should be made to get this United States-British picture of building into perspective. I myself have been carrying on a somewhat pointed correspondence in *The Financial Times* with Sir Alfred Bossom, MP, on the question of fast building in the United States, and I cannot help but feel that a lot of people, including possibly Sir Alfred, might have this business of comparing ourselves with the Americans on the wrong basis. If I can do anything to help get the thing into perspective tonight, then I feel I shall have done quite a good job.

I am now going to give you a few facts. I must say that figures are extremely difficult to come by, and in fact I still have not got the unemployment figures for the industry.

First of all, the organisation of American employers in the building industry: there are some 400,000 firms—and I think that some of these figures, if you work them out, will surprise you. They employ 2,420,000 men. I think you will see from that that, rather like ourselves, the American building industry is not made up of a small number of large firms, but, like ours, it is made up in fact of a very large number of small firms.

Therefore there were just under 2½m. operatives, made up as follows. There were 981,700, or just under a million, employed by general contractors; there were 1,438,500, or just under 1½m., employed by special trades contractors. The weekly earnings in the building industry in the United States average somewhere between about £30 and £35 a week.

I must make mention here of the 'automobility' of the average American operative, and that is something which one has to see to believe, because the very first thing that one has to do on site if one is a building contractor is to make a car park for one's operatives.

One last word on earnings. By comparison with other industries, I think I am right in saying that the construction industry in the United States is the highest hourly paid industry in the country.

Labour is recruited direct from the unions. There is a pool of labour in most of the big cities, and my own view is that productivity is well up on our own, for various reasons, and that individual output is anything from 10 to 15 or even 20 per cent. higher than individual output in this country. I speak with some experience of that because I managed to get myself taken on as a bricklayer's labourer and I learnt quite a lot about productivity and tickets (because I had not got a ticket I eventually got slung out). But I was there long enough to find out how fast and how hard they worked. Therefore, I am not bothered about anybody saying, 'They do not work as hard as we do.' I say, without fear of contradiction, that they do.

Prices of Materials

Timber was both cheap and plentiful, and so was ready-mixed concrete. These are some of the May and June prices: Gloss external finishing paint, 35s. a gallon; reinforcing steel, £45 a ton; sand, 9s. a ton fob plant; gravel, 10s. 6d. a ton, fob plant; common bricks, 215s. a thousand; facing bricks vary, but the official statistics give the prices as 338s. a thousand; a 5-foot enamel bath, £19 15s. 6d.; vitreous china wc, £8 12s. 3d. If they pay about the same for materials, and sometimes a little bit more, it is a very interesting problem as to how it is that they can pay bricklayers 30s. an hour in New York and yet produce buildings at an overall cost of, say, only 50 to 100 per cent. more expensive than ours.

I am now coming to the core of my talk. First of all, I think I had better tell you that I 'investigated' five different American companies. I visited their head offices and the plant yards; I discussed matters with management and labour; and I think that I got a reasonable picture of their set-up. I took five quite different companies. The first, based on New York, was doing a 120 m. dollar turnover, say £40 m. a year, doing all types of industrial and commercial work. The second had a turnover of about 40 m. dollars in Washington, doing the same sort of work. The third was in Detroit, with a turnover of about 3½ m. dollars a year, building small shops, churches, etc. I then visited a 20 m. dollars turnover company which did industrial but very little other building. I also visited a 10 m. dollar turnover company which did public utilities, including schools and the like, so I got a very good cross-section.

The one thing which you will find in any American office is detailed documentation. These American builders believe in getting everything on paper—procedures, processes, rules and regulations, organisation, job definition, company policy. Each company had a quite different organisation and a quite different policy. Each, also had a quite different set of documentation. I spent one complete afternoon in one of the smaller of such offices, just going through his documentation. Everybody had to fill in something before he did something else, and I said to him at the end of it all: 'Do you have any difficulty with all these forms?' He said: 'No, but I get a lot of difficulty in getting anybody to take notice of them when they are filled in!' It surprised me that speed of action was not hampered by this form filling—but in fact it all served a purpose—to assist mental processes.

Decentralisation Policy

I should imagine you would find that in America the number of people in the head office of a builder would be about half the number of people in a builders' office here, doing the same amount of work and with about the same turnover. That is because they decentralize to their sites an enormous amount of work. They also treat their head office staff as inflexible, but their site office as expendable in bad times. I found, too, that many businesses were built around staff of optimum size, and by that I mean that they limited the number of contracts they took to the size of the staff.

Now I come to top management in building firms. So far as I could make out the president over there combined the two offices that we know of chairman and managing director. Several vice-presidents would constitute the board of directors. A big New York company, however, had an executive vice-president, who took on the functions of the British managing director. I think that they were learning very fast that there is in a big firm a job for a chairman and a job for a managing director. In that company there were a number of vice-presidents who were not members of the board; it was really a reward for long service.

The president of a big firm would consider that he had a dual function, one being an overriding control of the company's operations, the other obtaining business. And this matter of obtaining business was quite scientific in this big company that I visited. I saw on their organisation chart a thing called 'Contracts Department.' When I saw that, I thought, 'Hullo, now I

know what they are talking about.' But in fact it was not what I thought. It was in charge of an engineer, who was really a public relations officer, and it was part of his job to have absolutely up-to-date intelligence on matters such as what jobs were likely to come along, where they were coming from, and so on. It was also his job to get snippets about that particular company into journals and papers, to get it talked about, and to dine and wine 'The right people.'

Now, having assumed that the president has got the job, there comes the question of estimating, and here, of course, one found that the documentation differed with each company. Remember that there are no quantity surveyors, but the thing that struck me on the management side on estimating was the very great thoroughness and detail into which they went.

The smallest company, the one in Detroit, which had only fifteen head office staff for a 3½ m. dollar turnover, had four qualified engineers, and by that I mean people who had taken degrees in civil engineering—the president, two estimators and a 'co-ordinator.' Most general foremen or superintendents are qualified engineers on the big jobs. The big American company I should think would have at least 25 per cent. of their staff made up of qualified engineers or graduates.

Sub-contractors' Room

Let us now return to the small company. They based the whole of their business on their five estimators under a vice-president. These men estimate for work, supervise its carrying out, including buying and the placing of sub-contracts. The president himself visited each job once a week. This was at one extreme. At the other was the 120 m. dollar turnover company, where there was a special estimating department and a sub-contractors' room. That was the room where the sub-contractors come, take off their quantities from the drawings made available and go out and price them. In some cases a sub-contractor would get a set of drawings, but in most cases he had to take them off in that room.

Centralised planning other than by 'process engineers' I did not find. Whereas I think we are waking up to this question of short-term planning, I think they have been doing it automatically, but they have not made a fetish of it, nor have they got any special department dealing with it. It is of course all part of their costing policy.

Coming to the buying department of the building firm I visited in Washington, they dealt not only with materials but employed what they called 'expeditors' as chasers. In this company sub-contracts were handled by the project engineer in conjunction with the estimators. In New York, on the other hand, the large builder had combined material ordering, sub-contracting and expediting under his purchasing department, and these two schools of thought are worth thinking about, the emphasis being on the buying department on the one hand and on the contracts management department on the other.

On the contracts management side I did not find such a tremendous difference from our own ideas on management in this country; it varied as between one company and the next; but on the whole their procedures were all very similar to our own. They all had an elaborate system of programming and progressing work.

Then there was a chap called a 'process engineer,' and he had a job which I really had not seen before or even heard about. His object in life was to ensure that all details of the working drawings required by the job were furnished in good time and in an unambiguous form in order to comply with the severe schedule of programming.

The fortnightly staff meetings were the main control they had from head office.

Formwork Manual

I consider that one of the biggest lessons for us is their cost management and accountancy. To say that the American construction industry is cost-conscious is an understatement—it is cost sub-conscious! Every firm had its own system of costing, some very much more elaborate than others, but they always had the same object, to show weekly, fortnightly or monthly, how much a particular operation was costing as compared with the target estimate. It was generally accepted that money was either made or lost on labour. They were not very interested in material. Most of them had an elaborate and comprehensive list of all possible labour operations on the site. This is typical of their documentation.

For instance, one firm I visited had a formwork manual which went out to every site. If you wanted to know what timber to use, you looked at your manual and picked out the job you had to do, and there it told you how many bits of timber were required, and what size was needed, etc., for that particular job. The same with this cost business. Everything was put down so that you could not forget it. They listed all the labour operations that were standard. They were coded numerically, not for secrecy, but for ease of recording on the job at the end of each day. Then there was an additional check from the timekeeper, assuring the accuracy of the time allocations. He would go out periodically and find out where men were, he would note it in his book and cross-check with the trades foremen on the allocation sheets to make sure that they were in fact recording them accurately. Now the point I want to make here—and this is only another impression, but I think it is important—is this, that the trades foremen are very much more alive to the importance of recording statistical data than in this country.

The collation of all this statistical information so received was done either by a cost clerk on the site or by the timekeeper, or sent back and collated at head office, where the weekly cost statements are compared with targets. Short-term planning was automatically applied: not quite the system of pre-measuring we are talking about here, but they did, of course, look ahead, including targets, in order to see how much they were behind or in front of the target at the end of that time. But remember all the time the small quantity of work which the general contractor would carry out himself.

The last management impression that I would like to record is on plant management and mechanisation. Here I was very surprised because I had expected when I visited what they call the plant yard to find everything highly efficiently organized, with masses of large machines all beautifully painted and numbered and all the rest of it. But I can tell you that, with one exception, their plant yards were more like junk yards. They seemed to be full of stuff, of reinforcing steel, odd bits of everything, and everything absolutely filthy. The only plant yard I saw which really had anything to compare with ours over here was at the big New York builder's. Even he had the same policy as the rest of them, in that he just did not hold any plant: he either bought it and sold it at the end of his job or just hired it. Now you must remember that this company had a turnover of 120 m. dollars a year. I have a list of everything it had in its plant yard, and I think it is extraordinary that it has not got one large machine in its plant yard, not even a bulldozer, a scraper or anything like that at all—not a thing. On the other hand, it has got a lot of small power tools.

On overheads and profits, I found to my surprise that the net profit of these building companies was considerably lower than our own.

Now I would like to sum up my main impressions of management in the American building industry. The first was one of better education and training, that we were still behind, not only in technical but in managerial training. I found a combination both of technical and managerial training was applied to many of the people entering building firms at all levels. There is a real demand for education—a real desire to improve.

No Social Barriers

My second main impression was one of incredible cost consciousness.

Thirdly, a sense of inquisitiveness and a willingness to try anything new. In fact, each of them was really a works study engineer in himself; always making comparisons and always interested in machines and labour utilisation figures and efficiency indices.

Fourthly, the relationship between architect and builder and also between inside and outside staff was very different from ours. There are no great social barriers there; there is no question of the white collar worker getting more than the outside man, they accept that each is necessary.

Fifthly, I found there was no interdepartmental bloody-mindedness. It was all one effort of the whole firm, and if anybody called for help from another department, if that help was there, it was offered and it was accepted.

One last point. I think that their organisational fetish and thoroughness leads to some rigidity. We as an industry are much more flexible now than are the Americans, and I really believe we are catching them up in most things. I think we will pass them in management techniques within the next ten years. Now I do not want to stick my neck out, but they are becoming very rigid in their whole process of mental discipline. This, I believe to be a hand-down from certain European immigrants.

The last impression I brought away was the industrial pride of everybody in the building industry from the operative, the teaboy right up to the company president.

BUILDING IN THE CITY

Revised Barbican Scheme to be Prepared

A REVISED scheme for the development of a residential neighbourhood in the Barbican area is to be prepared, the Court of Common Council agreed at their meeting on December 12. The Court accepted their Barbican Committee's proposal that the architects, Chamberlin, Powell & Bon, should be engaged to prepare a detailed revised scheme for the area.

The revised proposals and estimates, including town planning approval, are to be ready, and a prospectus drawn up before the Court's summer recess, which begins on July 24. It is intended that a prospectus of the type of residential accommodation that would be available should be drawn up in order that the demand for accommodation could be seen.

The committee recommended a fee of 35,000 guineas for the architects. If within seven years of the proposals being delivered the Corporation goes ahead with the residential scheme for the area, whether on the architects' plans or not, a further fee of 40,000 guineas or a proportion of that amount will be paid to Messrs. Chamberlin, Powell & Bon.

A reference back of the committee's report, moved by SIR SIDNEY FOX, a member of the committee, who said he had declined to sign it, was defeated. Sir Sidney alleged that the report had been 'rushed forward with unseemly haste,' and insufficient time had been given for consideration of a letter from the architects.

CAPT. ALFRED INSTONE, who collapsed later in the meeting and died on his way to hospital, pointed out that while the area was undeveloped it was costing the Corporation 'thousands and thousands of pounds.' In rushing the matter money was saved. But he did not think it was necessary to complete every detail of the plan before planning permission could be given.

The terms of reference proposed by the committee for the architects were: to prepare in detail a revised scheme, so that town planning approval could be obtained and financial estimates and a prospectus drawn up in relation to the area; to prepare a revised scheme for the development of land north of the Barbican, east of Aldersgate-street and south of the city boundary having regard to the needs of the main development south of the Barbican and, if so instructed by the committee, to prepare such detailed proposals as may be required in that area.

Also they were to ensure that the detailed scheme was fully integrated with the Martin/Mealand scheme for commercial development on the eastern and southern boundaries and with any further proposals north of the Barbican; and to consult with a firm of estate agents, or other persons experienced in the letting of flats and to include the views and financial estimates of setting such agents in their report.

The prospectus will be in relation to the area bounded by Moor-lane, Silk-street, Whitecross-street, Beech-street, Barbican, Aldersgate-street, the north-eastern boundaries of Ironmongers' Hall, Nicholl-square, Well-street, London Wall, Cripplegate Buildings and Fore-street. The plans are to include high density residential accommodation, new buildings for the Guildhall School of Music and Drama and the City of London School for Girls, and garages and ancillary services.

The Streets Committee, in their report, which was adopted, asked for authority to proceed with the scheme for constructing a public cleansing depot, wharf and administrative buildings on the north bank of the River Thames between Southwark Bridge and Cannon-street Station.

The committee said that in 1953, when proposals were first approved for the scheme, the estimated cost was £800,000. Now it was estimated to be £1,195,000. Sir Hugh Casson, FRIBA, consulting architect, Mr. H. A. Sandford, consulting engineer for heating, ventilation and dust extraction plant, and Messrs. Mott Hay & Anderson, consulting engineers for the design of the dock and depot foundations, had all been acting under the co-ordination of the city engineer. Planning permission for the various plans was received from London County Council on September 26, 1957.

Among variations to the original proposals was that the administration block should be six storeys instead of four, the extra accommodation being used for housing, including police flats.

Among recommendations by the Improvements and Town Planning Committee, which were approved, were that permission should be granted subject to conditions for the development of 14 and 15, Seething-lane, part of 50, Mark-lane and 8, 9, 9a, 9b, 10, 11 and 12, Byward-street by the erection of a new building for use as shops on the ground floor frontage to Seething-lane and offices on the upper floors and with a basement car park (appliances, City of London Real Property, Ltd., 16, Mark-lane, EC3).

The committee also recommended the sale of their interest in parts of 8, 9 and 10, Oat-lane, 4, Fitchetts-court and Fitchetts Court to the Worshipful Company of Pewterers for £13,750 for the company to develop the site as a livery hall with ancillary accommodation.

Developments subject to certain conditions were also permitted for: The erection of a building for use as shops on the ground floor, with basement storage and offices on the upper floors at 56 to 58, Cheapside and 1, Bow-lane (Gunton & Gunton, Empire House, St. Martin's le Grand, EC1); and the erection of a new building, comprising a 27-storey block on a two-storey base for use as offices on a site bounded by Ropemaker-street, Tenter-street and Moorfields (Messrs. Joseph, Lowndes-square, SW1).

SCHOOL BUILDING

Local Authorities Collaborate to Reduce Costs

A GROUP of local authorities consisting of Derbyshire, Durham, Glamorgan, Nottinghamshire, and the West Riding of Yorkshire County Councils, and the Coventry City Council, have decided to collaborate in order to sponsor and control a system of building with the following objects:— (a) To save the money being spent on precautions against mining subsidence. (b) To get better value for the money being spent on new schools by collectively negotiating with manufacturers and suppliers on the basis of a big building programme.

In addition to the authorities mentioned above, Leicester City Council and Warwickshire County Council have decided to co-operate by each building one school in this system of building. They will share in all the results and advantages of the work of the consortium, but until the number of schools which they are building in this way has increased they are not being asked to devote time or personnel to the running of the scheme.

The number of schools in the programme at the moment is 31, representing a total value of £2,867,000. The local authorities have decided to adopt a prefabricated system of building using standard components which can be assembled to design schools of all types to suit an infinite variety of site conditions. This system of construction has special advantages for sites affected by mining subsidence but can also be used with equal benefit on normal sites.

The co-ordination of architectural work within the consortium will be in the hands of a board of chief architects which will hold periodic meetings at the offices of each authority in turn. Representatives of the other chief officers such as clerks, education officers and treasurers will also attend these meetings where necessary. The day to day work of designing the schemes in the consortium programme will be carried out in the normal way by each authority's architects.

A working party has also been set up so that architects and quantity surveyors from each authority can meet, at frequent intervals, to discuss technical problems and to co-ordinate the bulk requirements of their authority's projects in the consortium's building programme. The chief officers' board will agree which elements should be the subject of collaboration and which will better lend themselves to local manufacturing and purchasing arrangements. Where bulk purchase is agreed, one member will negotiate on behalf of all the members for this particular element.

It is envisaged that quotations on a unit price basis will be obtained and that the contractual arrangements with the successful tenderer will mean that in consideration of actual orders being placed by individual authorities for individual projects at the times and in the quantities covered by the consortium arrangements, the manufacturer will supply the items at the unit price which has been agreed.

The appointment of the general contractor for their own programme of jobs, will be at the discretion of each member of the consortium acting through their ordinary committee structure. The approval of the arrangements put forward by the chief architect's board will be dealt with individually by the authorities concerned, in accordance with their normal practice.

'Design and Detailing of Screen Walls'

CONCRETE CLADDING SYSTEMS

THE fourth of the six weekly lectures on the 'Design and Detailing of Screen Walls,' which have been held at the LCC Brixton School of Building, SW4, was given by MR. J. G. WILSON, ARIBA, on 'Concrete Cladding Systems,' on November 21. The following notes are taken from Mr. Wilson's address:

One of the most remarkable developments that has taken place in recent years is the way in which concrete facing slabs have been accepted by the building industry. The technique of producing slabs with an exposed aggregate finish goes back many years, but it is only during the past 10 years that they have found their way into every architect's building vocabulary, so that today it would hardly be an exaggeration to say that no building is complete without at least a small area of exposed aggregate panels.

Rapid Development

This rapid development, although most encouraging, is not without its dangers, chief among these being the lack of background knowledge on the performance of various fixing and jointing methods now being used. To obtain this basic knowledge it may be necessary in some cases for buildings to have been up for as long as 20 years. Naturally the building industry cannot stand still and wait for this information to be collected, and certain risks must be accepted with all new building techniques.

Why, you may ask, have I drawn attention to this fact? It is because I am no wiser than the next man, and I do not want you to think that I have come here knowing all the answers. The only reason that I can account for being asked to give this lecture, is that I am in the somewhat privileged position of being able to see a fair cross-section of jobs on which concrete slabs have been used, both as applied finishes, and as claddings to framed structures, and have played some part in the development of this type of facing.

The technique of making slabs presents no real problem to the industry, and there are works situated throughout the country with experience in this class of work; normally it should only be necessary to approve the sample finish submitted by the works, and then to leave the manufacturing details to the firm. To impose upon any firm the manner in which the slabs should be made is unwise, for the reason that quite a few finishes can be produced in several ways, each equally good, and to insist upon one particular technique which may not agree with the firm's particular 'know-how,' can result in additional cost and possibly a disappointing result.

Materials to Specify

To guard against inferior work you can specify that not less than 600 lb. of cement shall be used in every cubic yard of backing concrete, and that this concrete shall have a minimum compressive strength of 5,000 lb. per sq. in. at 28 days. You can also specify that the strength of the mortar used in the facing mix shall not be richer than 1 to 1½, nor leaner than 1 to 3, regardless of the technique used for producing the exposed aggregate finish.

Another point that needs to be carefully watched is the amount of cover to the reinforcement. It is essential that the reinforcement be placed in the backing concrete and not in the facing mix, and that the cover shall be a minimum of ¾ in. —more, much more, if you can get it.

The reason for not permitting the reinforcement to be placed in the facing is fairly obvious. Very often the thickness of the special mix used for the facing is not more than ½ in. when using a small size coarse aggregate. Again it is very desirable in my view that the face of the slabs should to some extent be absorbent. The nearer one can approach the physical characteristics of good natural building materials, the more pleasing is weathering likely to be. Another reason for some degree of absorption is that rain running down the face of a building faced with an impervious material, concentrates the whole of the water at the joints, the weakest part of any system of cladding.

If the slabs are panelled on the back, which is normally the case with all but the smallest of slabs, the main reinforcement should be placed in the ribs and a light galvanised wire mesh reinforcement used in the panel faces.

Finally, it is essential that the slabs should be adequately cured before delivery to the site.

The Size of Slab

The size of slab that can be made is one that appears to worry many architects; sufficient is it to say that this is governed more by site handling equipment than by any limits set by the manufacturers.

Once the unit becomes too heavy for manual handling, say over 120 lb., then the bigger the unit the better within the limits of a 3- or possibly 5-ton crane. A great many of the problems associated with concrete cladding are brought about by using relatively small size units which introduce a multiplicity of joints and so increase the risk of moisture penetration.

If there is one thing more than another that I would like to see it would be the use of slabs of such a size that all vertical joints could be located on the centre line of the framing grid, or party walls as the case may be.

One way of enabling larger slabs to be used without increasing weight, is the use of lightweight concrete; panels of this type can be manufactured of cellular concrete, or lightweight aggregate can be substituted for normal dense aggregate. By this means the weight per cubic foot of concrete can be considerably reduced.

Besides the advantages of light weight, making for ease of handling, slabs of this type have greatly improved thermal insulation properties.

It does seem to me that most of the curtain walling systems are no more than an assembly of standard components and that all individuality of expression, which I thought to be architecture, is completely lost. With concrete, the problem is different; you are entirely free to choose the colour, shape and surface texture of your panels, and with the help of your engineer to decide on the way they shall be used. I thought this was architecture, or am I just old fashioned?

'DAYLIGHT' FOR 24 HOURS

Claims for Luminescent Windows

MR. EDWARD G. F. ARNOTT, director of research at the Westinghouse Company's Bloomfield laboratories in New Jersey, reports that his scientists believe they will be able to produce 'daylight' in the average home 24 hours a day with a product called electroluminescent windows.

Using electroluminescence, scientists have been able to coat sheets of glass with phosphors capable of producing light. In this manner, they have already produced electroluminescent panels and murals for commercial use.

Now they are experimenting with transparent phosphors that will enable them to sandwich a phosphor between two sheets of glass having an electrical conducting coating.

'During the day,' Mr. Arnott says, 'this glass would allow the daylight to come through and permit the viewer to look out, or in, in the customary manner. At night, however, the transparent phosphor would emit light.'

Already being produced are panels no thicker than window glass, which can be used to line and light an entire wall or ceiling and give off light equivalent to that of a modern well-lighted office.

INQUIRY BUREAU

Waterproofing a Cellar

COMMENTING upon the question of 'Waterproofing a Cellar,' which was the subject of an answer in Inquiry Bureau in *The Builder* of December 6, Mr. J. Hurst, of Tretol, Ltd., Tretol House, The Hyde, NW9, writes: I cannot help feeling that the various methods of overcoming this problem as suggested are somewhat cumbersome and could well prove ineffective.

Asphalting is, of course, a most satisfactory course to adopt, but would require a loading coat to keep this in position. At the same time water pressure would have to be relieved and the cost of such an operation is likely to be out of all proportion to that justified by the project.

The use of bituminous felt in sheet form, lapped and bedded, would not prove satisfactory as it would be necessary for surfaces to be completely dry to enable the bonded adhesive to function in the first place and subsequent water pressure would force this off the walls.

The use of bituminous emulsions is a method which I personally abhor, and there is every likelihood of this system failing.

The most satisfactory alternative, in my opinion, and, incidentally the cheapest, would be that afforded by the use of a waterproof cement rendering, applied to a suitable specification; this method having been adopted hundreds of times over during the past years with complete success.

IN PARLIAMENT

By Our Parliamentary Correspondent

The Hyde Park Improvement Scheme

DOUBTS about the capacity of the proposed two-lane underpass between Knightsbridge and Piccadilly, which is to be included in the Hyde Park improvement scheme, were expressed when the Bill which gives sanction to the acquisition of land for the project came up for second reading in the House of Commons on December 11. Most speakers urged the construction of four lanes.

In general, the measure received the support of the Opposition, but two Labour members sought to reject it on the ground that preference was being given to London at the expense of many other projects in the country.

MR. WATKINSON, Minister of Transport, who moved the second reading, said that the Bill provided for the biggest single road improvement in London since Kingsway was built in 1905. At the moment more than £10m. worth of road works was committed in London. The Bill would add another £4½m. That fitted in with the general balance of works and development in London, which compared more than favourably with what any other country was doing.

All major cities in the world were faced with traffic congestion. In London the time was for action not argument. The underpass it was proposed to build would take heavy commercial vehicles, but it was not the wish of London Transport to put buses through, because of embarkation and disembarkation difficulties.

In building the underpass the LCC would do certain works to make the addition of two extra lanes a relatively easy matter at some future date, if need be. Those two extra lanes would cost an extra £750,000, and he was unable to justify spending more.

Four lanes would take more of Hyde Park and also more houses. In addition, Piccadilly and Knightsbridge would suddenly bulge into an awkward shape. The LCC and the Road Research Laboratory agreed with this. The new subways would mostly not have steps but ramps, so that people with prams and bicycles could wheel them down.

MR. ERNEST DAVIES, for the Opposition, said that London had a claim on priorities. He did not share the Minister's optimism about the capacity of the underpass, and considered it would be wiser to look to the future and build a four-lane underpass now. More traffic must be taken underground by the authorisation of the construction of new tubes.

Unless the Victoria line was built within a few years the traffic problem would again become intolerable. The Transport Commission would be unable to make the line pay if they had to finance it at the existing high rate of interest. It should be financed by the Government and handed over, perhaps on lease, to the London Transport Executive for operation.

MR. ELLIS SMITH, who moved the rejection of the Bill, asked on what basis Park Lane had received priority. Road improvements were needed in every industrial area. He asked if the Minister would be prepared to introduce another Bill, which had for its object the improvement of industrial towns.

MR. HERBERT MORRISON, in supporting the Bill, was another who questioned the capacity of the underpass. He felt that two lanes of traffic would be insufficient, and cited the Blackwall Tunnell as an example of the effect. It was false economy.

MR. NUGENT, replying to the anxieties expressed about amenities, said that nothing definite had yet been settled about the layout, but the LCC's proposal had not been refused by the Government. The final layout would be settled after consultation between the Royal Fine Art Commission, the LCC and the Government. Although it had been suggested that a four-lane underpass should be built, the proposal for two lanes had a reserve capacity of 40 per cent. over the existing volume of traffic.

Improvements at Marble Arch were estimated to have a 25 per cent. reserve. An underpass would be very costly and involve heavy demolition in Edgware Road. For the future the Minister had asked him to preside over a joint committee with the LCC to see what road plan could be worked out for London during the next 20 years.

The amendment to reject the Bill was negatived and the Bill read a second time.

Post of Director-General of Works, MoW

THE failure of the Minister of Works to fill the vacant post of Director-General of Works was criticised in the House of Commons on December 10, when the Minister was questioned about his intentions, but MR. MOLSON seemed satisfied that his decision was justified and rejected other adverse comments which had been made about his department in various publications.

He had been asked by MR. MALCOLM MACPHERSON, a Labour back bencher, how long it was intended that the post should remain unfilled.

'In the absence of a suitably qualified candidate,' MR. MOLSON replied, 'a non-professional general manager has been appointed, and will take control in March next. It is not possible to say how long this arrangement will last.'

MR. MACPHERSON said that it was unsatisfactory that the Director-General of a large and important department should be replaced, simply because no properly trained candidate was available, by someone not technically qualified. It was a major instance of a big question about which final policy had not yet been decided —how to integrate professional and technically qualified people into the Civil Service machine.

MR. MOLSON said that he was disappointed that none of the professional candidates who had been interviewed by the selection board had been considered suitable for the post. He saw no reason to suppose that the matter would not be efficiently administered by the official who had been appointed.

MR. ANTHONY GREENWOOD asked whether the Minister had studied comments in the architectural Press about the failure of the department to find a suitable candidate. Was he aware of the opinion that was widely held that until he showed that he realised that this was not an administrative appointment, but one of the most important architectural appointments in the country, he would not find a suitable candidate?

The Minister should give an assurance that if anyone was appointed he would be given reasonable freedom to go ahead with the job and to show initiative without being hampered by an obsolete machine.

MR. MOLSON said that this was an administrative job. There was no need for the general manager to have professional qualifications. There was a chief architect in the Ministry, who was responsible for architecture. As Minister he disagreed with the criticisms which had been made in various publications about the department.

Carlton House Terrace

MR. PEYTON asked the Minister if he was satisfied that Carlton House Terrace was in an adequate state of repair and decoration.

MR. MOLSON: Yes.

MR. PEYTON urged the Minister to take a walk around these beautiful buildings, and asked whether he did not think from his observations of them so far that they presented the appearance of seedy decay, which gave the worst possible impression to foreign visitors to Britain. He hoped the Minister would take the matter seriously.

MR. MOLSON said that it was the intention to build a new Foreign Office behind Nash's façade. When it would be possible to undertake that was not apparent at the moment. It was intended that the existing buildings should last at least until 1963. In 1955 about £30,000 was spent on reconditioning, and about £18,000 a year had been spent on maintenance during the last four years. It was hoped that it would be possible to paint the façade in the next financial year, but that would depend on whether the money was available.

Embassy Offices, Rome

MR. VANE asked the Minister what plans he had for rebuilding on the site of the old British Embassy in Rome near the Porto Pia; and whether he had chosen an architect.

MR. MOLSON.—Providing the Italian authorities agree, I propose to sell about half of the site and erect Embassy offices on the remainder. I am not yet able to make a statement about the appointment of an architect.

MR. VANE said that it was not every day that a British architect had the chance of designing a building alongside a work by Michelangelo. Did the Minister not consider that this called for a special competition?

MR. MOLSON said that he was fully aware of the importance of the site, and agreed about the opportunity provided for the erection of a worthy building. It was for that reason he was unable to name an architect for appointment to this job. He was doubtful about holding a competition as that was not popular with architects, as had been found over the Nash Terraces.

MR. SHINWELL asked where the Minister would get the money for this purpose.

MR. MOLSON said that he was proposing to sell half the site, and from the proceeds of that sale hoped to be able to pay for the erection of the buildings.

MR. GIBSON asked the Minister for a statement about the progress being made in dealing with the unsightly deep shelter entrances in London.

MR. MOLSON.—Progress is being made on the work of improving the appearance of these shelter entrances. Work has been completed at The Avenue, Clapham South, and at Stockwell Green, and a start has been made on the two entrances to the Goodge-street shelter in Tottenham Court-road and Chenies-street. The rest will be dealt with as quickly as circumstances allow.

MR. GIBSON said that the answer only proved the necessity for the question. The work that the Minister had described as having been completed consisted of nothing worthwhile except some colour wash being put on these ugly buildings. When the Bill transferring these buildings to the Ministry was before the House they had been given a promise that there would be a close examination with a view to removing their unsightliness. Nothing had been done so far. Would the Minister investigate this, and get something going?

MR. MOLSON agreed to examine the matter, but could not hold out a prospect of spending large sums of money.

London Theatre Sites

ON December 10, MR. HENRY BROOKE, Minister of Housing and Local Government, was asked about redevelopment proposals for London theatre sites. MR. KENNETH ROBINSON asked what assurances he had received from the New Zealand Government that they would apply for planning permission as an act of courtesy in connection with any redevelopment of the site of Her Majesty's Theatre.

MR. BROOKE, in a written reply, stated: There is a well-recognised procedure under which Crown development is the subject of consultation with the planning authorities, although it does not require formal permission; and I have no doubt that this procedure, or any modification of it which may be in force when the time comes, will be followed by the New Zealand Government.

MR. ROBINSON also asked which London theatres had been the subject of planning application for change of user since his predecessor amended the London Development Plan with reference to theatres; and which applications had been granted, which refused, and which were still under consideration.

MR. BROOKE: Since my predecessor (Mr. Sandys) approved the County of London Development Plan in March, 1955, the London County Council as planning authority have granted permission for the redevelopment of the following theatres: Alexandra, Stoke Newington; Bedford, Camden High-street; Gaiety; New Cross Empire; St. James's*; Stoll. A theatre is to be incorporated in the new building to be erected on the Stoll Theatre site.

The Chelsea Palace Theatre; the Granville Theatre, Fulham Road; the Hackney Empire; and the King's Theatre, Hammersmith, are being used as television studios or theatres; and the Mercury Theatre, Ladbroke Grove, is being used as a ballet school.

The New Lindsey Theatre, Notting Hill, has been demolished in connection with the Notting Hill Gate road widening.

Permission has been refused for the redevelopment for other purposes of Collins' Music Hall, the Granville Theatre, and the Palace Theatre.

I understand that the council have under consideration applications for permission to change the use of the Arts Theatre, the Camberwell Palace and the Queen's Theatre, Poplar, and also a new application in respect of the Alexandra Theatre, Stoke Newington.

* This was a detailed permission implementing an outline permission given before the approval of the development plan.

Unfit Houses

MR. MAHON asked the Minister for the estimated total number of unfit houses in England, Scotland and Wales; how many were estimated to be demolished within the first five years; how many had been demolished to date; and what was the estimated number for demolition up to December 31, 1958.

MR. BROOKE, in a written reply on December 11, stated: The returns submitted by local authorities under Section 1 of the Housing Repairs and Rents Act, 1954, gave an estimated total of 847,000 unfit houses in England and Wales. Of these, 375,500 were to be demolished or closed within the first five-year period, 1956 to 1960. Between January 1st, 1956, and September 30th, 1957, 66,670 unfit houses were demolished or closed. The returns did not call for annual programmes, and I cannot therefore give an estimate for 1958. My responsibilities do not extend to Scotland.

Points from Other Replies

Medway By-Pass.—I am investigating the possibility of extending the Medway Motor Road eastwards to by-pass Canterbury. (Minister of Transport, December 11.)

Ross Spur Road.—Work is expected to start on the Ross Spur early in 1958, and I am giving high priority in my programme to the new 'Heads-of-the-Valleys' road. (Minister of Transport, December 11.)

South Wales By-Pass.—I shall give an early place in my road programme to the Port Talbot By-Pass, the preparatory work for which is being completed as quickly as possible. (Minister of Transport, December 11.)

LCC

Hammersmith Broadway Viaduct

IN the light of the 'present much-improved position as regards Government grants for roads,' the London County Council's town planning committee have given fresh consideration to the question of adding a viaduct spanning Hammersmith Bridge-road, Queen Caroline-street and Fulham Palace-road in connection with the Cromwell-road extension scheme. This was reported to the Council at their meeting on Tuesday (December 17). Drawings are on Page 1081.

After consultation with the Hammersmith Borough Council the committee have told the Minister of Transport—who has announced his conviction that the flyover will be necessary—that they would be willing to see the viaduct included in a future programme of approvals of major road schemes. The appropriate committee of the Borough Council have agreed in principle.

The town planning committee point out that the growth of traffic on the route to the West of England and in particular to London Airport, makes the viaduct in addition to the roundabout at Hammersmith Broadway—on which work has begun—one of more urgent priority. Airport traffic is likely to increase considerably.

The committee point out that it is likely to be some time before the viaduct scheme can be carried out. It is estimated that the cost of the viaduct should not exceed £1½m., which should rank for 75 per cent. grant from the Ministry.

The present intention is that the fly-over should be a reinforced concrete structure starting at its eastern end at a point south of Shortlands and rising to about 21 ft. high; it will then run on the level over Fulham Palace-road, between the Gaumont cinema and St. Paul's Church, until it crosses the new triangular roundabout where Hammersmith Bridge-road joins the recently constructed Great West-road. From there it will slope to ground level. The viaduct would be about half a mile in length and have an overall width of about 60 ft.

For the greater part of its length, the viaduct will consist of spans each about 60 ft. long and supported on piers comprising three columns. Lighting standards will be placed on the central island which will divide the two 22-ft. wide carriageways. To reduce to a minimum the effect of such a long structure on the amenities of the adjoining area, it is intended to keep the design and structure as simple and light as possible.

Condensation in Blocks of Dwellings

MEASURES for dealing with condensation in blocks of dwellings over two storeys high, but without central heating have been under consideration. It has been decided, stated the housing committee in their report that, as an immediate step, insulating plaster should be provided in all new blocks now under contract (or shortly to be included in contracts) at an extra cost of about £10 a dwelling.

Difficulty with condensation has been experienced particularly with maisonettes partly overhanging access balconies as in the four-storey block at Newlands estate (Wandsworth). The remedy finally adopted at this estate entailed covering the whole of the floors affected with special insulated tiles and lining exposed concrete beams and walls with plasterboard backed with aluminium foil fixed to timber battens to the walls.

It is proposed that this method shall also be applied to existing dwellings at the following estates: Ackroydon, Alton and Argyle (Wandsworth), Arden (Shoreditch), Barnsbury (Islington), Loughborough (Lambeth), Patmore (Battersea and Wandsworth), Woodberry Down (Stoke Newington and Hackney) and York Hill (Lambeth). The total cost of the work is estimated at £30,570, including redecoration and additional ventilation, where necessary. This represents an average cost of £65 a dwelling.

LAW REPORTS

Building Contract Dispute

A. Schofield (Builders), Ltd., v. Scarborough Corporation. Queen's Bench Division before Mr. Justice Pilcher.

AN arbitrator's award in favour of A. Schofield (Builders), Ltd., of St. Bedes, Hornsea, Yorks., was set aside by MR. JUSTICE PILCHER, in the Queen's Bench Division on December 9. His lordship gave judgment for Scarborough Corporation with costs, granting them an alternative award set out by the arbitrator.

The dispute arose out of two contracts for the building of council houses at Scarborough and concerned the cost of installing gas services to all houses. The first contract was for the building of 26 houses at the price of £33,010 and the other for building 44 houses for £55,200.

In his award the arbitrator stated that under the 26-house contract the Corporation were entitled to deduct from the final contract account the sum of £36 10s. for each of six houses, a total of £219, and £160 18s. 11d., the sum the Corporation had actually paid to the North Eastern Gas Board in regard to the other 20 houses. He held the builders should install gas services in all houses under the 44-house contract without charge to the Corporation.

It was stated that in dealing with the specifications for the contracts the Corporation's architect made certain alterations, but did not alter a clause relating to gas services which provided a prime cost sum for only one type of house and not for the others.

In his judgment, Mr. Justice Pilcher said the builders intended the sum for gas services to each house should be £16 10s. as in a previous contract, but the Corporation intended it should be £36 10s. for 3-bedroom houses and £34 12s. 10d. for 2-bedroom houses.

Both parties had made mistakes. The Corporation failed to make provision for gas services for certain types of houses while the builders failed to examine the specification and discover the mistake.

His lordship held in favour of the arbitrator's fifth alternative award under which the Corporation were entitled to deduct £549 from the price of the 26-house contract and £726 from the 44-house contract price. The Corporation were to pay the builders certain sums the builders had paid the Gas Board. The builders would pay the costs of the arbitration.

Arbitration Award Varied

A. L. Farman v. Malling Rural District Council. Queen's Bench Division before Mr. Justice Pilcher.

IN a reserved judgment in the Queen's Bench Division on December 11 Mr. Justice Pilcher varied in favour of a local authority an arbitration award by which additional fees were awarded to an architect, Mr. Albert Lawrence Farman, of Upper Richmond-road, Mortlake, SW, who was employed on the authority's housing schemes involving the erection of more than 1,000 dwellings.

The arbitrator, Mr. L. A. Culliford, made his award on September 3, this year. Mr. Farman was awarded against Malling Rural District Council, Kent, additional fees of £300 for additional house designs, £2,749 in respect of extra contractors employed in the schemes and £1,212, less £210 already paid by the Council, for extra work in connection with the erection of blocks of three-storey flats. The council originally moved the court to remit the award to the arbitrator on certain questions of law, but during the hearing it was agreed that the matter should proceed on his lordship's consideration of the special case stated by the arbitrator for the opinion of the High Court, the rural council contesting the arbitrator's findings.

Mr. Harold J. Willis, QC, and Mr. Patrick Stirling (instructed by Messrs. Sharpe, Pritchard & Co.), agents for Mr. F. W. B. Linnit, Clerk to the Rural Council, appeared for the respondent Council; Mr. G. H. Garland (instructed by Messrs. Sydney Redfern & Co.) represented the claimant architect.

Giving judgment, MR. JUSTICE PILCHER said he had come to the conclusion that the arbitrator's award of £300 to Mr. Farman for additional house designs was wrong. Mr. Farman had agreed his remuneration for this work with the council in September, 1950, and after that he had no further claim. Regarding additional fees in respect of extra contractors employed on the council's sites, the judge said that on October 8, 1954, the council had agreed to a claim by Mr. Farman for 'one guinea per house per contractor.' Only five days afterwards, however, he wrote to the council that although he had thought a guinea 'very reasonable,' he had since worked out what was involved in a typical contract, and the result indicated that a more appropriate fee would be just over £3 per dwelling.

The judge said that the arbitrator awarded Mr. Farman an additional £2,749 on that basis, but his lordship ruled that Mr. Farman was bound by his agreement with the council on October 8, 1954, and was only entitled to £241 under that head of his claim.

In regard to the third award of £1,212 for work on the flats, Mr. Justice Pilcher said that, following representations by Mr. Farman about his remuneration, the council, on June 17, 1953, agreed to raise his fees on all contracts from £6 per house to £10 per house, the £10 to be a static figure. The council contended that work on the flats would also be at this flat rate, but Mr. Farman had pursued a claim for a higher rate for the flats.

The judge said it was clear that the council's agreement to raise the architect's remuneration from £6 to £10 per dwelling was a 'substantial concession' which the arbitrator had failed to take into account when awarding the liberal sum of £1,212.

His lordship therefore directed that unless the parties could agree an amount to be deducted from the award so as to take the concession into account, the matter must go back to the arbitrator to decide how much the reduction should be.

After argument by counsel as to costs, his lordship said that although he was reluctant to do so, he would remit to the arbitrator the question of the costs of the arbitration. Costs of the High Court hearing were awarded to the rural council against Mr. Farman.

The judge commented: 'This has been a very troublesome case—it has become a sort of Alice in Wonderland.'

LMBA

Outlook for Building New Year

IN a Christmas letter to his area chairmen, the president of the LMBA, MR. W. KIRBY LAING, reviews the building outlook for the New Year. In it he says:

'It would be comforting to be able to say that the outlook for the New Year is satisfactory, but quite frankly it is not. The building industry is one which is affected very quickly by the economic atmosphere of the times. The increased Bank Rate and the credit squeeze are making themselves felt increasingly, and it seems that a progressive reduction in new building will be seen as the year advances. This is unfortunate because we rely on continuity of employment to provide the lengthy training needed for our craftsmen. If the rhythm of employment is halted, skilled building operatives are lost to the industry and are not readily recovered.

'Even though there is nothing "set fair" about the outlook, one must not take too gloomy a view of our prospects. The Bank Rate will not always be at 7 per cent., the brakes will not always be on; there is still a vast lee-way of construction to make up, and if we employers and employed are realistic we shall be using the next period to prepare ourselves for even more efficient working in the future, to which I look forward with confidence.'

LCC Building Tenders

THE LCC is in future to supply drawings to builders tendering for LCC contracts.

This information is contained in a letter which the secretary of the LMBA has received from the architect to the LCC, Mr. Hubert Bennett, FRIBA. This says that it has been decided to supply each tenderer for works under the architect's supervision with a set of drawings to assist in the preparation of tenders. These will normally include $\frac{1}{8}$-in. scale drawings, together with such others as are usually included as the contract drawings.

The LMBA has replied welcoming the announcement, which is in accordance with the views of the National Federation and the LMBA, on the importance of providing full information to tenderers at the earliest possible stage.

PERSONAL COLUMN

MR. D. M. EDWARDS has joined the sales staff of Linden Doors, Ltd., of Cowley, Uxbridge. For some years Mr. Edwards was sales manager for Yelverton Dawbarn Bros., Ltd., of Birkenhead.

Following the retirement of MR. JOHN RAINS as managing director of J. W. Rains, Ltd., the board of Parker, Winder & Achurch, Ltd., announce that they have appointed two of their directors, MR. H. E. SLAUGHTER and MR. R. L. TEARE, ACA, to the board of J. W. Rains, Ltd. Mr. Teare, who has been secretary of the company for the past eight years, has been released for whole-time executive duties at J. W. Rains, Ltd. The assistant secretary, MR. BRIAN BILLINGHAM, ACA, has been appointed secretary of the parent company.

COMPANY NEWS

Resolutions to create 1,000,000 additional ordinary shares of £1 each and 1,000,000 additional 6 per cent. cumulative preference shares of £1 each and to effect the fully paid scrip issue of one new ordinary share and one new 6 per cent. cumulative preference share for every one ordinary share held were passed at the extraordinary general meeting of **George Wimpey & Co., Ltd.**, held on December 6.

The Builder

CURRENT PRICES OF MATERIALS

THE information given on these pages has been specially compiled for *The Builder* and is copyright. It is the intention that the details given should indicate fair average prices of materials, not necessarily the highest or the lowest. The prices apply to large quantities of materials loaded at works, delivered at London Stations or at site in London Area as stated. Prices for smaller quantities ex merchant's warehouse will necessarily be higher so as to include the stocking and handling costs involved. Due to the exceptional circumstances now prevailing it is recommended that the prices of materials should be confirmed by inquiry from suppliers and merchants.

AGGREGATES AND SAND

Delivered site in full lorry loads. Average of prices for Boroughs of Westminster, Paddington, Holborn and St. Pancras.

	£ s. d.
Pit Ballast ... ... per yd.	1 7 1
Pit Sand ... ... ,,	1 4 6
Washed Sand ... ... ,,	1 7 8
¾ in. Shingle ... ... ,,	1 4 0
¾ in. Broken Brick ... ... ,,	1 0 9
Pan Breeze ... ... ,,	16 9
Fine or Coarse Foamed Slag Aggregate ... ... per ton	3 5 0

2 yds. of fine and 2.6 yds. of coarse per ton.

CEMENT, etc.

Including non-returnable jute sacks or paper bags.

Best British Portland Cement. Standard Specification delivered Charing Cross area.	
6-ton loads and upwards, site ... ... per ton	5 12 0
1 to 6 tons, site ... ... ,,	6 4 0
Rapid Hardening Cement in 6-ton loads and upwards to site ... ... ,,	6 2 6
1 to 6 tons do. site ... ... ,,	6 14 6
Aquacrete Water Repellent Cement. 32s. 6d. per ton on ordinary cement prices.	
Sulphate Resisting Cement. 32s. 6d. per ton on ordinary cement prices.	
Red, Buff or Khaki Colorcrete in 6-ton lots ... ,,	8 12 0
Other colours according to colour.	
In 4-ton lots from 310s. 0d. to 780s. 0d. per ton.	
White Portland Cement ... ... ,,	13 17 6
Under 1 ton ... ... per cwt.	16 11
417 Cement (Ultra Rapid Hardening) in 6-ton lots and upwards ... ... per ton	7 4 6
Super Cement (Waterproof), 32s. 6d. per ton above Portland Cement.	
Cullamix Tyrolean Finish, £11 10s. 0d. to £14 5s. 0d. (1-ton loads and upwards).	
Lightning and Ciment Fondu Brands High Aluminous cement, 6-ton lots and up ... ... ,,	15 14 6
Stourbridge Fireclay, 6-ton loads at Railway Depot, London ... ... ,,	6 17 6
Moler Mortar Powder for Flue Bricks (London sites) ... ... per cwt.	1 8 6

BRICKS

Full Loads.	
First Hard Stocks ... ... per 1,000	13 14 6
Second Hard Stocks ... ... ,,	12 13 6
Mild Stocks (Kiln Burnt) ... ... ,,	9 4 0
Mild Stocks ... ... ,,	8 19 0
All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job.	
2½in. Nominal Fletton Bricks to sites in W.C. District Commons ... ... ,,	5 18 0
Cellular do. ... ... ,,	5 18 0
Keyed do. ... ... ,,	6 0 0
Rustics ... ... ,,	7 10 0
Cellular Rustics ... ... ,,	7 10 0
Single Bullnose Commons ... ... ,,	7 12 6
Sandfaced ... ... ,,	8 10 0
Tuscans ... ... ,,	9 5 0
Saxons ... ... ,,	9 13 0
Golden Buffs ... ... ,,	10 0 0
Dapple Light ... ... ,,	10 7 6
Best Blue Pressed Staffs (London Stations) ... ,,	29 15 6
,, Bullnose (London Stations) ... ... ,,	30 9 6
Blue Wire Cuts (London Stations) ... ... ,,	26 15 6
Midhurst Lime Bricks (London sites) ... ... ,,	10 15 6
Uxbridge Whites (London sites) ... ... ,,	10 2 0
Special Purpose Sandlime Bricks (London sites) ... ,,	7 18 6
2½ in. Best Stourbridge Fire Bricks (London Stations) ... ... ,,	29 9 9
3 in. do. (London Stations) ... ... ,,	35 7 9
2½ in. Moler Flue Bricks (London sites) ... ... ,,	35 0 0
2½ in. Machine-made Sandfaced Red Facings (London sites) ... ... ,,	15 18 6
2½ in. Machine-made Multi Red Facings (London sites) ... ... ,,	16 3 6
2½ in. Hand-made Sandfaced Red Facings (London sites) ... ... ,,	16 3 6
2½ in. Hand-made Sandfaced Multi-Colour Facings (London sites) ... ... per 1 000	16 18 6
Hand-made Sandfaced Cherry Red Facings, Berkshire district (London sites) ... ... ,,	18 14 0
Hand-made Sandfaced Multi-Colour Facings. Berkshire district (London sites) ... ... ,,	18 14 0
Rubber Bricks for gauged arches (London sites) ... ,,	42 17 6
2½ in. Surrey Clamp Burnt Multi Stock Facings (London sites) ... ... ,,	14 4 0
2½ in. Surrey Kiln Burnt Multi Stock Facings (London sites) ... ... ,,	15 16 0
Glazed Bricks (London sites), White, Ivory, Brown—	
Stretchers ... ... ,,	64 0 0
Headers ... ... ,,	63 0 0
Quoins, Bullnose and 4½ in. Flats ... ... ,,	80 0 0
Double Stretchers ... ... ,,	85 0 0
Double Headers ... ... ,,	77 10 0
One side and two ends ... ... ,,	87 0 0
Two sides and one end ... ... ,,	89 10 0
Splays and Squints ... ... ,,	83 0 0

Cream and Buff £3 extra over White. Other colours, hard glaze, £8 10s. 0d. extra over White. All above prices plus 32½% for Best quality and plus 32½% less 10% for Second quality.

PARTITION SLABS, etc.

Delivered Central London Area. (W.C. District.)

	Minimum lorry loads		£ s. d.
HOLLOW CLAY PARTITION BLOCKS (Keyed)			
*2 in.	140 yds.	per yd. sup.	4 5
*2½ in.	140 yds.	,,	4 8
*3 in. (3 cavity) ...	120 yds.	,,	5 5
BUILDING BLOCKS (Keyed)			
*3 in. (6 cavity) ...	110 yds.	,,	5 7
*4 in. (6 cavity) ...	95 yds.	,,	6 10
6 in. (8½ in. × 5½ in.)	1,250 blocks	per 1,000	26 18 0

*Half blocks at no extra charge.

CLINKER CONCRETE			
2 in.	100 yds.	per yd. sup.	3 9
2½ in.	85 yds.	,,	4 4
3 in.	75 yds.	,,	5 3
4 in.	55 yds.	,,	6 5
CRANHAM			
2 in.		,,	6 9
2½ in.		,,	7 5
3 in.		,,	8 9
4 in.		,,	10 9
4½ in. Load bearing quality		,,	11 10
MOLER PARTITION BLOCKS			
2 in.	150 yds.	,,	15 0
2½ in.	120 yds.	,,	15 6
3 in.	100 yds.	,,	16 0
4 in.	90 yds.	,,	19 0
LIGHTWEIGHT CONCRETE BUILDING AND PARTITION BLOCKS OF VARIOUS SOURCES OF MANUFACTURE			
2 in.	100 yds.	,,	5 8
2½ in.	80 yds.	,,	6 5
3 in.	65 yds.	,,	7 5
4 in.	50 yds.	,,	9 4
4½ in.	44 yds.	,,	9 11
6 in.	33 yds.	,,	14 10
THERMALITE-YTONG PARTITION BLOCKS			
2½ in.	144 yds.	,,	7 0
THERMALITE-YTONG LOADBEARING INSULATING BLOCKS			
3 in.	120 yds.	,,	8 5
4 in.	90 yds.	,,	11 0
5 in.	72 yds.	,,	13 9
6 in.	60 yds.	,,	16 6
8½ in.	42 yds.	,,	1 3 8
FLOOR BLOCKS AND FILLER TILES			
3 in. Floor Blocks 12 in. by 12 in. delivered in full lorry-loads		per 1,000	34 1 0
4 in. do		,,	36 10 0
5 in. do.		,,	43 15 0
6 in. do.		,,	49 19 0
7 in. do.		,,	61 8 0
8 in. do.		,,	71 19 0
12″×3″×⅝″ Filler Tiles in multiples of 10 tiles		per 1,000 multiples	42 15 0
12″×4″×½″ do. do.			73 15 0

STONEWARE DRAIN PIPES, etc.

The following are the percentages to be added to the Revised Standard List (Nov., 1956) prices delivered London Area.

Delivered ex Merchants Wharf or Depot or Manufacturers Works.

	Over 2 tons	Over 100 pieces Under 2 tons	Under 100 pieces Under 2 tons
Best Quality ...	−2½%	+15%	+22½%
BSS Best do. ...	+10% −2½%	+10% +15%	+10% +22½%
Tested Quality ...	+37½% −2½%	+37½% +15%	+37½% +22½%
BSS Tested do.	+47½% −2½%	+47½% +15%	+47½% +22½%

STONEWARE DRAIN PIPES, etc.—*continued*

		£	s.	d.
3 in. Land Drain Pipes (in 12 in. lengths)	per 1,000	11	10	6
4 in. do.	,,	15	3	6
6 in. do.	,,	31	9	0
9 in. do.	,,	59	13	9

DAMP COURSE

Hessian base bitumen 7 lb. per yd. sup. in 24 ft. rolls cut to wall widths in lots of £6 value and over delivered London area	per yd. sup.		3	5½
Asbestos base ditto 7 lb. per yd. sup. do. do.	,,		5	3
Lead lined bitumen ditto 9¼ lb. per yd. sup. do.	,,		12	2
18 in. × 9 in. British damp course slates	per 1,000	43	8	11
14 in. × 9 in. do. do.	,,	32	8	2
9 in. × 9 in. do. do.	,,	18	18	9
18 in. × 4½ in. do. do.	,,	19	19	9
14 in. × 4½ in. do. do.	,,	15	18	3
9 in. × 4½ in. do. do.	,,	10	14	3

STONE

Bath Stone—				
Monks Park	per ft. cube		9	4
St. Aldhelm Box Ground	,,		10	7
Delivered in railway trucks at South Lambeth B.R. Western Region.				
Doulting Stone Random Blocks. Delivered London area	,,		9	2
Beer Stone. Delivered London area	,,		8	9
Portland Stone—				
Brown Whitbed in random blocks, 20 ft. average delivered in railway trucks at Nine Elms, B.R. Southern Region	,,		8	8
Yorkshire Stone—Blue Robin Hood Quality. Delivered to site London in 6-ton lots.				
9 in. × 3 in. Rubbed, weathered, throated and stooled cills	per ft. cube	4	1	9
12 in. × 6 in. do. do.	,,	2	18	3
12 in. × 3 in. Plain coping, twice throated	,,	2	5	3
12 in. × 3 in. Weathered and twice throated coping	,,	3	0	3
14 in. × 6 in. do. do.	,,	2	14	3
4½ in. × 9 in. Plinth rubbed on top and face	,,	2	8	6
3 in. sawn two sides Slabs, random sizes	per ft. sup.		8	8
Templates and Cover Stones, 3 in., 4 in. and 6 in. thick, edges coped for rendered brickwork	per ft. cube	1	9	9
do. do. fair one edge for fair faced brickwork	,,	1	15	3
Hard York—				
12 in. × 2 in. Square Steps, rubbed on top and edge	per ft. run		10	6
14 in. × 3 in. Round-nosed Steps, rubbed on top and front	per ft. cube	2	15	6
12 in. × 6 in. Plain Steps, rubbed top and front	,,	2	8	6
2 in. Rubbed and Jointed Paving, given sizes	per ft. sup.		9	9
2 in. Sawn Paving, edges squared, in random sizes	per yd. sup.	3	8	6

TILES AND PANTILES

Delivered London area by road in 6 tons or over per 1,000				
Machine-made Pantiles and French pattern Tiles from Lincolnshire district		29	19	0
Hand-made Pantiles Berkshire district		55	18	0
Hand-made Double Roman Bridgwater district		60	11	6
Hand-made 10½ × 6½ tiles Berkshire district		15	9	0
Machine-made 10½ × 6½ Staffordshire district		14	13	6
Hand-made Hip and Valley tiles per doz.		1	11	3
Machine-made Hip and Valley tiles do.		1	9	6
Concrete tiles 10½ × 6½		8	10	0
do. Interlocking (49S)		19	16	6

NOTE.—Breakage in transit, purchasers' responsibility.

SLATES

First-quality Slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.				
24 × 12		143	15	10
22 × 12		116	17	4
22 × 11		105	10	10
20 × 12		99	0	1
20 × 10		94	16	9
18 × 10		65	16	9
18 × 9		57	14	0
16 × 10		51	17	0
16 × 8		40	11	9

NOTE.—Breakage in transit, purchasers' responsibility.

TIMBER

Softwood—				
Joinery quality	Ex Wharf per standard	£115 to £140		
Carcassing quality	do. ,,	£95 to £100		
1 in. Tongued and Grooved Flooring	do. ,,	£108	0	0
Hardwood—				
Mahogany—African S.E.	do. per ft. cube	1	10	0
do. Honduras do.	do. ,,	3	5	0
Oak European do.	do. ,,	2	5	0
do. Japanese do.	do. ,,	2	10	0
do. English Logs sawn	do. ,,	2	0	0
Teak 8 in. average S.E.	do. ,,	3	17	6
Walnut African Logs sawn	do. ,,	1	5	0

DOORS (in Lots I-II)

		£	s.	d.
Delivered London area				
1⅛ in. 4 Horizontal Panel. Pattern 4 in. deal				
2 ft. 0 in. × 6 ft. 6 in.	each	1	16	0
2 ft. 3 in. × 6 ft. 6 in.	,,	1	17	6
2 ft. 6 in. × 6 ft. 6 in.	,,	1	18	6
2 ft. 9 in. × 6 ft. 6 in.	,,	2	0	6
2 in. do. but top panel open. Pattern 4 × G in deal				
2 ft. 6 in. × 6 ft. 6 in.	,,	2	9	0
2 ft. 9 in. × 6 ft. 6 in.	,,	2	11	6
2 in. 2 Panel top panel open. Pattern 2 × G in deal				
2 ft. 6 in. × 6 ft. 6 in.	,,	2	3	0
2 ft. 9 in. × 6 ft. 6 in.	,,	2	5	0

SUNDRIES

Delivered London area.				
1 in. Wood Wool Slabs 6 ft. 0 in. × 2 ft. 0 in. in quantities of 1 ton (89 yds. to 1 ton)	per yd.		6	2
1½ in. do. (67 yds. to 1 ton)	,,		8	0
2 in. do. (52 yds. to 1 ton)	,,		9	9½
2½ in. do. (45 yds. to 1 ton)	,,		11	3
3 in. do. (39 yds. to 1 ton)	,,		12	7½
Quantities under 1 ton add 1d. per ½ in. of thickness.				
¼ in. imported insulation Board, quantities over 5,000 sq. ft.	per 100 sq. ft.	2	2	6
¼ in. Hardboard do.	,,		2	0
⅜ in. do. do.	,,	2	17	6
⅜ in. Asbestos Flat Building Sheets	per yd. sup.		4	3½
¼ in. do.	,,		5	10½
Roofing Felt 1-ply	,,		1	9
do. 2-ply	,,		2	2½
Best Scotch Glue in slabs	per ½ cwt.	5	0	0
do. pearl	,,	5	5	0
Croid Glue	28 lb.	2	6	0
Cut Nails 3 in. (1-ton. lots)	per ton	78	10	0
do. 4 in. and up (1-ton lots)	,,	75	0	0
Wire Nails 3 in. (4-cwt. lots)	per cwt.	3	13	11
do. 4 in. and up (4-cwt. lots)	,,	3	13	3

METALS

STEEL JOISTS, ETC.

Basis Joists—				
6 in. × 5 in., 8 in. × 5 in., 8 in. × 6 in., 10 in. × 6 in., 12 in. × 6 in. plain cut to lengths delivered London area	per ton	51	2	6
Extra for sizes				
3 in. × 1½ in. 4 in. × 1¾ in.	,,	3	10	0
3 in. × 3 in.	,,	2	10	0
4 in. × 3 in.	,,	2	5	0
10 in. × 4½ in.	,,	1	10	0
5 in. × 2½ in. 5 in. × 3 in.	,,	1	15	0
4¾ in. × 1⅞ in.	,,	3	5	0
5 in. × 4½ in. 7 in. × 3½ in. 13 in. × 5 in.	,,		15	0
6 in. × 3 in. 24 in. × 7½ in.	,,	2	0	0
6 in. × 4½ in. 7 in. × 4 in. 8 in. × 4 in. / 9 in. × 4 in. 10 in. × 5 in.	,,	1	5	0
12 in. × 5 in. 22 in. × 7 in.	,,	1	0	0
9 in. × 7 in. 10 in. × 8 in. 12 in. × 8 in. / 14 in. × 5½ in. 14 in. × 6 in. 14 in. × 8 in. / 15 in. × 5 in. 15 in. × 6 in. 16 in. × 6 in. / 16 in. × 8 in. 18 in. × 6 in. 18 in. × 7 in. / 18 in. × 8 in. 20 in. × 6½ in. 20 in. × 7½ in.	,,		10	0
Steel angles average price	,,	53	2	6
Steel tees average price	,,	54	2	6
Fabricated work delivered London—				
R.S. Joists cut and fitted	,,	70	12	6
Compound girders	,,	77	0	0
Stanchions	,,	82	10	0
Compound stanchions	,,	87	0	0
In Roof Work—Trusses and Purlins	,,	100	12	6
Average prices not for awkward work.				
Angle cleats and ⅝ in., ¾ in. and ⅞ in. bolts average price London area	per cwt.	5	19	0

FERRO-CONCRETE BARS

Mild Steel Ferro-Concrete bars British manufacture to BSS785 ex London Stock ⅜ in. diam., and upwards	per ton	49	17	6
¼ in. diam.	,, extra	8	12	6
5/16 in. do.	,,	6	12	6
⅜ in. do.	,,	4	12	6
½ in. do.	,,	3	2	6

MILD STEEL TUBES

Tubes to BSS1387 and Fittings. List prices and following discounts:

Galvanised Tube—	Under 1 ton	Over 1 ton	W.I. Fittings	Malleable Fittings
Class A	+23½%	+20½%	Light +48%	Malleable List
Class B	+36½%	+33½%	Heavy +55½%	−20½%+40%
Class C	+56½%	+53½%		
Black—				
Class A	+ 4½%	+ 1½%	Light +35¾%	Malleable List
Class B	+18½%	+15 %	Heavy +43¾%	− 20½%
Class C	+34½%	+31½%		

C.I. HALF-ROUND GUTTERS

Delivered London per yd. in 6-ft. lengths

	Gutters	Nozzles	Stop Ends
3 in.	4/0½	3/7	1/-
3½ in.	4/4½	3/11	1/-
4 in.	5/8	4/5	1/7
4½ in.	6/3	4/11	1/10
5 in.	6/11½	5/4	2/2

METALS—*continued*

C.I.O.G. Gutters

	Gutters	Nozzle	Stop Ends
3 in.	5/2½	4/8	1/3
3½ in.	5/10	4/8	1/7
4 in.	6/5	4/11	1/10
4½ in.	6/11½	5/8	2/2
5 in.	7/7½	6/5	2/6

C.I. Rain-water Pipes

Per yd. in 6-ft. lengths	Pipe	Bends	Branches
2 in.	8/7½	4/5	6/4
2½ in.	8/7½	4/11	8/6
3 in.	9/8½	6/2	9/2
3½ in.	11/0½	7/3	11/–
4 in.	12/9	8/9	13/1

L.C.C. Coated Soil Pipes

2 in.	9/8½	7/7	9/2
2½ in.	10/4	8/5	11/5
3 in.	11/7	9/2	13/7
3½ in.	12/11½	11/5	15/10
4 in.	14/9	12/9	18/8

Above prices for gutters, rain-water and soil pipes for under 5 cwt. lots only. Lots over 5 cwt. see List No. 3300 dated February 1, 1955, plus 22½% and tonnage allowance. 4-ton lots 5 per cent., 2-ton lots 2½ per cent.

L.C.C. Coated Drain Pipes

In 9-fts.	cwt.	qt.	lb.	per yd.	Bends	Branches
4 in.	1	1	17	35/3	23/9	42/–
6 in.	2	0	1	51/7	63/9	101/–

Asbestos Rain-water Pipes and Fittings

All less 17½ per cent. discount.

	2 in.	2½ in.	3 in.	4 in.
Pipes 6-ft. lengths ...per yd.	4/7	4/10½	5/11	7/10
Shoes ... ... each	3/–	3/3	3/10	5/2
Single Branches ... ... „	4/8	5/6	6/7	9/2
Bends square or obtuse ... „	3/3	3/7	4/8	6/7
Swan Necks 4½ in. proj. ... „	3/7	4/8	5/2	7/3
„ 6 in. „ ... „	3/10	5/2	5/10	7/10

Asbestos O.G. Gutters and Fittings

	4 in.	4½ in.	5 in.	6 in.
Gutters 6-ft. lengths ...per yd.	4/4	4/9½	5/9	6/10½
Drop ends ... ... each	3/6	4/–	4/9	5/5
Stop ends ... ... „	1/1	1/2	1/3	1/5
Angles ... ... „	3/7	4/1	5/–	5/10
Nozzles ... ... „	3/6	4/–	4/9	5/–
Union Clips ... ... „	1/9	2/1	2/6	2/11

Asbestos Half-Round Gutters and Fittings

	3 in.	4 in.	4½ in.	5 in.	6 in.
Gutters 6-ft. lengths per yd.	3/0½	3/7½	3/8½	4/4½	6/1
Drop ends ... each	2/6	3/–	3/3	3/7	5/2
Stop ends ... „	1/–	1/1	1/2	1/3	1/5
Angles ... ... „	2/10	3/3	3/7	3/10	5/2
Nozzles ... „	2/6	3/–	3/3	3/7	5/2
Union Clips ... „	1/3	1/4	1/5	1/7	2/5

	Per ton basis in London £ s. d.
Iron—Staffordshire Crown Merchant Quality	52 17 6
Mild Steel Bars	47 12 6
Mild Steel Hoops	46 14 6

	Ex Merchant's Stock per ton Two-ton lots £ s. d.
Soft Sheets C.R. and C.A.—	
20 gauge	62 14 6
24 gauge	65 4 6
26 gauge	68 4 6
Galvanised Corrugated sheets 6 ft. to 9 ft.—	
20 gauge	69 10 0
24 gauge	73 0 0
26 gauge	78 5 0
Galvanised flat sheets C.R. and C.A.—	
20 gauge	71 0 0
24 gauge	74 10 0
26 gauge	79 15 0

ALUMINIUM AND ALUMINIUM ALLOYS

(Base prices)	£ s. d.
Sheet BS 1740 S1C 18 SWG (36 in. wide) ... per lb.	2 11
Sheet BS 1470 NS3 Utility 18 SWG (36 in. wide) „	2 8½
Coiled strip BS 1470 S1C 18 SWG (24 in. wide) ... „	2 10
Coiled strip BS 1470 NS 3 Utility 18 SWG (24 in. wide) ... ... „	2 8
Coiled strip for flashing 99.7% purity 22 SWG (12 in. wide) ... ... „	3 0½
Corrugated sheet BS 1470 NS 3 Utility Circular Profile 8 ft. × 32 in. × 20 SWG ... ... per sheet	1 12 6
Corrugated sheet BS 1470 NS 3 Utility Industrial Profile 8 ft. × 31¼ in. × 20 SWG ... ... „	1 18 1
Corrugated sheet BS 1470 NS 3 Utility Mansard Profile 8 ft. × 31¼ in. × 20 SWG ... ... „	1 11 7
Extruded section BS 1476 E1C simple moulding ... per lb.	2 9
Extruded section BS 1476 E1C 1 in. diam. round „	2 6½
Extruded section BS 1476 HE1WP simple angle ... „	3 0
Extruded section BS 1476 HE10WP 1 in. diam. round „	2 11
Tubing BS 1471 T1C 1¼ in. O/D × 20 SWG ... „	4 4½
Tubing BS 1471 HT10WP 1¼ in. O/D × SWG ... „	5 8

PLUMBERS' BRASS WORK, etc.

Delivered in London area.

M.O.H.

All per doz.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Screwdown bib cocks Crutch head for iron	87/–	128/8				
Toilet bib cocks for iron ...	109/–	158/5				
Screwdown stop cocks for iron	66/–	95/9	188/–	363/–	522/6	917/6
do. with two unions for lead	89/–	132/–	234/4	472/–	623/6	1389/6
Double nut boiler screws ...	18/8	26/5	47/6	48/6	67/–	93/6
Heavy Croydon ball valves ...	77/–	193/6	312/5	568/8	734/10	—
Plumbers' union brass lead to iron	19/6	23/6	38/6	52/10	70/6	165/–

	1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
Caps and screws	33/–	40/8	59/6	92/5	118/10	155/3
Brass sleeves		31/11	31/11	56/2	74/10	91/5
	1½ × 6 lb.		1½ × 6 lb.	2 × 7 lb.		3 × 7 lb.
Lead P. trap with brass cleaning screws	62 6		78 6	124 9		213 3
Lead S. Trap do....	75 6		93 6	153 6		275 6

Solder	s. d.
Plumbers' ... ... 1 cwt lots 332/– 14 lb. lots per lb.	3 6
Tinmen's ... ... „ „ 408/– „ „	4 1
Blow pipe ... ... „ „ 411/– „ „	4 3

Copper Tubes and Sheets

Copper tubes BSS 659/1944 on the basic price of 21½d. per lb. plus gauge and manufacturing extras as follows. Minimum quantities, 3 cwt.

	Extra d.		d.
¼ in. × 19 gauge ...	14½	Total per lb.	35⅞ approx per ft.	9⅝
⅜ in. × 19 „ ...	13	„ „	34⅛ „ „	13½
1 in. × 18 „ ...	11½	„ „	32⅝ „ „	20½
1¼ in. × 18 „ ...	10⅞	„ „	32 „ „	24½
1½ in. × 18 „ ...	10⅞	„ „	32 „ „	29
2 in. × 17 „ ...	12½	„ „	33⅝ „ „	47

Rolled Copper sheets up to 48 in. wide, basic price plus gauge and manufacturing extras ... ... per ton £217 0 0

Zinc

	£ s. d.
Sheet Zinc 10 gauge (25 SWG) 5 cwt. lots upwards per cwt.	6 18 6
do. 12 gauge (23 SWG) „ „	6 16 0
do. 14 gauge (21 SWG) „ „	6 14 9

Brass Tubes

	s. d.
Brass tubes basic price, plus gauge and manufacturing extras ... ... per lb.	1 5⅜

LEAD SHEET AND PIPES

Basis selling price in minimum one-ton delivery to one address in London or Home Counties.

	£ s. d.
Lead Sheet, English, 3½ lb. substance and upwards per ton	109 10 0
Lead Water Pipe in coils ... ... „	111 15 0
Lead Soil Pipe 10 ft. or over 2 in. to 4 in. dia. ... „	113 5 0
„ over 4 in. dia. ... ... „	115 5 0
Lead Gas or Untinned Compo pipe ... ... „	113 5 0
Extras over Basis for quantities under 1 ton	
5 cwt. and under 1 ton ... ... per cwt.	2 0
3 cwt. do. 5 cwt. ... ... „	4 0
1 cwt. do. 3 cwt. ... ... „	6 0

Smaller quantities than 1 cwt. priced specially.

Supplying sheet lead and lead pipe to less than basis weights and cutting to sizes less than basis charged extra according to current trade schedule.

Allowance for Old Lead, collected £60 10s. 0d. per ton weighed at buyer's works.

PLASTER, etc.

	£ s. d.
Coarse Pink in 1-ton loads and over Delivered on Site per ton	8 9 6
do. White do. do. ... „	8 19 0
Siripite Coarse do. do. ... „	8 10 6
do. Fine do. do. ... „	8 18 6
Blue Lias Lime in 6-ton loads ... ... „	6 14 6
Hydrated Lime (Grey) do. ... ... „	5 17 6
do. (White) do. ... ... „	6 5 0
Lump Lime (Grey) do. ... ... „	5 7 0
do. (White) do. ... ... „	5 14 6
White Keen's or Parian Cement in 1-ton loads ... „	12 4 6
Pink Keen's or Parian Cement in 1-ton loads ... „	11 19 3
Granite Chips in 6-ton loads ... ... „	2 8 6
Hair ... ... per cwt.	4 17 6
Gypsum Plaster Lath or Base Board ⅜ in. thick, 600 yds. and over in one delivery. Delivered site ... per yd.	2 5
1,200 yds. ... ... „	2 4
Do. Insulating do. ⅜ in. thick 600 yds. and over in one delivery. Delivered site ... ... „	3 0
1,200 yds. ... ... „	2 11½
Gypsum Plaster Wall Boards, 3 and 4 ft. wide, 6 to 12 ft. ⅜ in. thick, 600 yds. and over in one delivery Delivered site ... ... „	2 8
1,200 yds. ... ... „	2 7
Do. Insulating do. ⅜ in. thick 600 yds. and over in one delivery. Delivered site ... ... „	3 3
1,200 yds. ... ... „	3 2½

PAINT AND DISTEMPER

		£ s. d.
Delivered London area		
Ceiling Distemper	per cwt.	1 7 6
Washable Distemper	„	5 5 0
Gloss Paint	per gal.	2 12 0
Snowcem cement paint (in 1 cwt. drums)	per cwt.	3 11 0
LEAD PRODUCTS AND OILS		
Ground White Lead, in 1 cwt. kegs...	per cwt.	8 12 3
Genuine White Lead Paint, 1-19 gal. lots in 1 gal. tins	per gal.	3 6 6
Genuine Red Lead, Dry, 1 cwt. keg	per cwt.	5 8 3
Genuine Linseed Oil Putty, 1 cwt. keg	„	2 14 0
Size XD quality 28 lb.	per tin	9 0
Raw Linseed Oil (5 gal.) drums extra	per gal.	17 0
Boiled Linseed Oil (5 gal.) do.	„	17 6
SUNDRIES		
Turpentine substitute (5 gal.) drums extra ...	„	5 4½
do. do. (40 gal.) do. do.	„	4 8⅝
Solignum, Brown (5 gal. cans) Exterior	„	8 4
Creosote (40 gal. barrels)	„	2 3
Paste Powder (1 lb. packets)	per lb.	1 10
White Lining Paper	per piece	1 2½

VARNISHES, etc.

		£ s. d.
Delivered London area		
Oak Varnish, Outside or Inside	per gal.	2 0 0
Oak Pale Copal do.	„	2 0 0
Hard Drying Oak for Inside	„	2 5 0
Crystal Paper Varnish do.	„	2 8 0
Eggshell Flat Varnish do.	„	2 6 0
Finest Carriage Varnish	„	2 7 0
Front Door Varnish	„	2 4 0
Japan Gold Size	„	1 18 0
Black Japan	„	1 16 0
Brunswick Black	„	1 12 0
Berlin Black	„	1 10 0
Terebene	„	1 17 0
Knotting (1 gal. bottles free)...	„	1 15 0
French and Brush Polish (do.)	„	2 2 0

GLASS

	per ft. super s. d.
Delivered London area	
18 oz. Sheet Glass Ordinary Glazing Quality-Cut Sizes	7⅞
24 oz. „ „ „ „ „ „	10⅛
26 oz. „ „ „ „ „ „	1 0⅛
32 oz. „ „ „ „ „ „	1 4¼
⅛ in. Rolled Plate	11¼
7/32 in. Rolled and Rough Cast	1 3
¼ in. „ „ „ „	1 3¾

	per ft. super s. d.
⅛ in. Figured Rolled and Cathedral, Standard patterns:	
White Group 1	1 1½
do. Group 2	1 3½
do. Standard Tints	1 10
do. Special Tints	6 8
⅛ in. Pinstripe, Hammerstripe, Reeded, Reedlyte and Luminating Group 3	1 4½
¼ in. Wired Cast	1 7½
¼ in. Georgian Wired Cast	1 7½
Hollow Glass Blocks—	Each
B.P.2 5¾ × 5¾ × 3⅞ in.	3 3
P.B.3 7¾ × 7¾ × 3⅞ in.	5 0
P.B. 32 7¾ × 7¾ × 3⅞ in.	5 0
Radiused Corner Blocks to match up with—	
P.B.2	6 0
P.B.3	7 6
P.B.32	7 6
¼ in. Polished Plate Glass, G.G. Quality—	Per ft. super
In plates not exceeding 2 ft. sup.	4 3
„ „ „ 5 ft. sup.	5 3
„ „ „ 45 ft. sup.	6 3
„ „ „ 100 ft. sup.	6 9
¼ in. Polished Plate, extra sizes, *i.e.*, plates exceeding 100 ft. sup. or 160 in. one way or 96 in. both ways.G.G. quality—Not exceeding 135 ft. sup. or 240 in. one way or 130 in. both ways	10 0
Not exceeding 180 ft. sup. or ditto	13 4

Plates exceeding 180 ft. sup. prices on application.
Substances other than ¼ in. Polished Plate at Special Prices Quantity Tariff—Sheet and Sundry Glass.

The following prices apply to minimum quantities of one size and one pattern delivered by the manufacturer to one site at one time.

Description of Glass	Minimum quantity	Per ft. sup. s. d.
18 oz. sheet O.Q.	3,000	5½
24 oz. „ „	2,000	7
26 oz. „ „	2,000	9½
32 oz. „ „	2,000	1 1½
⅛ in. Rolled Plate	1,000	9½
⅛ in. Figured Rolled and Cathedral Standard Patterns, White Group 1	1,000	9½
do. Group 2	1,000	11½
⅛ in. Pinstripe, Hammerstripe, Reeded, Luminating and Spotlyte Group 3	1,000	1 0½
7/32 in. Rolled Plate or Rough Cast	2,000	1 0½
¼ in. „ „ „	2,000	1 1½
¼ in. Wired Cast, Hexagonal	2,000	1 3½
¼ in. Georgian Wired Cast	2,000	1 4

The Builder

CURRENT RATES OF WAGES

AS FROM MAY 27, 1957. (Every endeavour is made to ensure accuracy but we cannot be responsible for errors.)

KEY TO SCHEDULE OF GRADE RATES.

Grade Classification.	A	A1
Craftsmen	4/6	4/5½
Labourers	3/11½	3/11

Town.	*Grade.*
Aberavon	A
Aberdare	A
Abergavenny	A
Abingdon	A1
Accrington	A
Addlestone	A
Afan Valley	A
Aldeburgh	A1
Aldershot District	A1
Alfreton UD	A
Alnwick UD	A
Altrincham	A
Amble	A
Ambleside	A1
Amersham	A
Ammanford	A
Andover	A1
Anglesey, Isle of	A1
Ardingly	A1
Arundel	A1
Ascot	A1
Ashbourne RD	A1
Ashbourne UD	A1
Ashby-de-la-Zouch UD	A
Ashby Woulds UD	A
Ashford (Kent)	A1
Ashford (Middlesex)	A
Ashington UD	A
Ashtead	A
Ashton-under-Lyne	A
Aspatria and Brayton	A1
Atherstone RD	A
Attleborough	A1
Axminster	A1
Aylesbury	A1
Aylsham	A1
Bagshot	A1
Bakewell UD	A1
Banbury	A1
Bangor	A1
Barnard Castle UD	A
Barnoldswick UD	A
Barnsley CB	A
Barnstaple	A1
Barrow-in-Furness	A
Barrow-upon-Soar RD (part Thrussington)	A1
Barry	A
Basford RD (exc. Willoughby-on-the-Wolds A1)	A
Basingstoke	A1
Bath	A
Batley MB	A
Baxterley	A1
Beaconsfield District	A
Bearl	A
Beccles	A1
Bedale RD	A
Bedford	A
Bedlington	A
Bedlingtonshire UD	A
Bedwas	A
Beeston & Stapleford UD	A
Belper UD	A
Belton	A
Berkhamsted	A
Berrington	A1
Berwick Borough	A
Beverley MB	A
Bewdley MB	A
Bexhill-on-Sea	A1
Bideford	A1
Biggleswade	A1
Billericay	A
Billing	A
Billingham UD	A
Bilsthorpe	A
Bilston MB	A
Birchington	A1
Birkenhead	*
Birmingham CB	†A
Bishop Auckland UD	A
Bishop's Stortford	A
Bishops Castle MB	A1
Bispham	A
Blackburn	A
Blackpool	A
Blackwell RD	A
Blandford	A1
Blaydon UD	A
Blidworth	A
Blyth B.	A
Bodmin	A1
Bognor Regis	A1
Boldon UD	A
Bolsover UD	A
Bolton	A
Boston MB	A
Bourne End	A
Bournemouth District	A
Brackley MB	A1
Bracknell	A1
Bradford CB	A
Bradford-on-Avon	A1
Braintree	A1
Brandon & Byshottles UD	A
Brecon—Borough of...	A1
Breconshire, County of ...	‡A1
Brent Knoll	A1
Brentwood	A
Bridgend	A
Bridlington MB	A
Bridlington RD	A1
Bridgnorth MB	A1
Bridgnorth RD	A1
Bridgwater	A1
Brierfield	A
Brighouse MB	A
Brighton & Hove	A
Bristol District	A
Broadstairs	A1
Bromsgrove UD	A
Broughton, Flint	A
Buckfastleigh	A1
Buckingham	A1
Buckley	A
Bungay	A1
Burnham-on-Crouch	A1
Burnham-on-Sea	A1
Burnley	A
Burton-on-Trent C.B.	A
Bury	A
Bury St. Edmunds	A1
Buxton	A
Byfleet	A1
Caernarvon	A1
Caernarvonshire, Cnty. of	‡A1
Calder Valley	A
Camberley District	A1
Cambridge	A
Cannock UD	A
Canterbury	A1
Cardiff	A
Cardiganshire, County of	‡A1
Carlisle	A

CURRENT RATES OF WAGES—Continued

Town.	Grade.
Carlton UD	A
Carmarthen—Borough of	A1
Carmarthenshire, Cnty of	‡A1
Carnforth	A
Castleford UD	A
Caterham	A
Chapel-en-le-Frith	A
Chard	A1
Charmy Down	A
Chatham District	A
Chatteris	A1
Cheadle (Staffs) RD	A
Chelmsford	A
Cheltenham	A
Chepstow	A
Chertsey	A
Chester	A
Chester-le-Street UD	A
Chesterfield MB	A
Chesterfield RD	A
Chichester	A1
Chipping Norton	A1
Chipping Sodbury	A1
Chippenham (inc. Chippenham Within and Hardenhuish)	A1
Chorley	A
Cirencester	A1
Clacton	A1
Clay Cross UD	A
Cleethorpes MB	A
Clevedon	A1
Cleveleys	A
Clitheroe	A
Coalville UD	A
Cobham (Surrey)	A
Colchester	A
Colne	A
Colwyn Bay	A1
Congleton	A1
Consett UD	A
Conway	A1
Corby UD	A
Cornwall, County of	‡A1
Corsham District	A
Coventry CB	A
Cranbrook	A1
Cranleigh	A1
Cranwell Aerodrome Site	A
Crawley	A1
Crewe	A
Crewkerne	A1
Cromer	A1
Crook and Willington UD	A
Crowborough	A1
Cuckfield	A1
Cwmbran	A
Dalton-in-Furness	A
Darlington CB	A
Dartmouth	A1
Darwen	A
Daventry MB	A1
Deal	A1
Denbigh Town	A1
Derby CB	A
Devizes	A1
Devon, County of	‡A1
Dewsbury CB	A
Didcot	A1
Diss	A1
Doncaster CB	A
Dorchester	A1
Dorking	A
Dorset, County of	A1
Dover	A1
Dovercourt	A1
Driffield UD	A
Drigg & Carleton	A
Droitwich MB	A
Dudley CB	A
Dunstable	A
Durham B	A
Eastbourne	A
E. Glam. & Mon. Val.	A
East Grinstead District	A1
East Kesteven RD	A1
East Retford MB	A
Eastwood (Notts) UD	A
Ebbw Vale & District	A
Edenbridge	A1
Ely	A1
Epping	A
Evesham MB	A1
Exeter	A
Exmouth	A1
Fakenham	A1
Falmouth	A1
Fareham	A
Faversham	A1
Felixstowe	A1
Filey UD	A
Fleetwood	A
Flint MB	A
Folkestone	A1
Frinton	A1
Frome	A1
Gainsborough UD	A
Gateshead CB	A
Gillingham (Dorset)	A1
Gillingham (Kent)	A
Glastonbury & Street	A1
Glossop	A
Gloucester	A
Gloucestershire, Cnty. of	‡A1
Godalming	A1
Goole, MB	A
Goole RD (part—Airmyn, Hook)	A
Gosport	A
Grantham MB	A
Gravesend	A
Grays Thurrock UD Area	A
Great Yarmouth	A
Grimsby CB	A
Grimsby RD (part)	A1
Guildford District	A1
Halesowen MB	A
Halifax CB	A
Halstead	A1
Haresfield	A1
Harlow	A
Harpenden	A
Harrogate MB	A
Hartlepool B	A
Harwell	A
Harwich	A1
Haslemere	A
Hastings	A1
Hatfield (Herts)	A
Havant	A
Haywards Heath	A1
Heanor UD	A
Hemel Hempstead	A
Henley-on-Thames	A1
Hereford	A
Herefordshire, Cnty. of	‡A1
Herne Bay	A1
Hertford	A
Hexham RD	A
Hexham UD	A
Heysham	A
Heywood	A
Higham Ferrers MB	A
High Wycombe	A
Hinckley UD	A
Hitchin	A
Hoddesdon	A
Holywell	A
Horley	A
Horncastle UD	A1
Horsham	A1
Horwich	A
Huddersfield CB	A
Hull	A
Hunstanton	A
Huntington (Staffs)	A
Ilfracombe	A1
Ilkeston MB	A
Ilkley UD	A
Ipswich	A
Isle of Sheppey	A
Isle of Thanet	A1
Isle of Wight	A1
Jarrow B	A
Keighley MB	A
Kendal	A
Kenilworth UD	A
Kettering MB	A
Keynsham	A
Kidderminster MB	A
Kingskerswell	A
King's Lynn	A1
Kingsteignton	A1
Kirkham	A
Knaresborough UD	A
Knutsford	A
Lancaster	A
Leamington MB	A
Leatherhead	A
Leeds CB	A
Leek UD	A
Leicester CB	A
Leighton Buzzard	A1
Leiston	A1
Leominster	A1
Letchworth	A
Lewes	A1
Lichfield MB	A
Lincoln CB	A
Liskeard	A
Littlehampton	A1
Liverpool	A1
Llandudno	*
Llanelly (incl. Llanelly RD)	A
Llanfairfechan	A1
Llangollen	A1
London	*
Long Eaton	A
Looe	A1
Loughborough MB	A
Louth MB	A1
Lowestoft	A
Loxton	A1
Ludlow MB	A1
Ludlow RD	A1
Luton	A
Lyme Regis	A1
Lyneham (Devon)	A
Lytham	A
Macclesfield	A
Maidenhead	A
Maidstone	A
Maldon (Essex)	A1
Maltby UD	A
Malton UD	A1
Malvern UD	A
Manchester	A
Manningtree	A1
Mansfield MB	A
March	A1
Margate	A1
Market Harborough RD	A1
Market Harborough UD	A
Market Rasen UD	A1
Martock	A1
Maryport	A
Matlock UD	A
Melksham	A1
Melton Mowbray UD	A
Merionethshire	A1
Merthyr	A
Mexborough UD	A
Middlesbrough CB	A
Middleton	A
Middlewich	A
Mildenhall	A
Milford Haven UD	A1
Minehead	A
Monmouth—Borough of	A1
Monmouthshire	A1
Morecambe	A
Moreton Valence	A1
Morley	A
Morpeth B	A
Morpeth RD	A
Mundesley	A1
Nantwich	A
Neath & Valley	A
Nelson	A
Newark MB	A
Newbury	A
Newcastle-on-Tyne CB	A1
Newcastle-under-Lyme	A
New Forest District	A1
Newmarket	A1
Newport, Mon.	A
Newport Pagnell	A1
Newquay	A1
Newton Abbot	A1
Normanton UD	A
Northallerton District	A
Northallerton UD	A
Northampton CB	A
North Shields	A
North Walsham	A1
Northwich	A
Norton Radstock	A1
Norwich	A
Nottingham CB	A
Nuneaton MB	A
Oakham RD	A1
Oakham UD	A1
Okehampton	A1
Oldham	A
Ongar	A
Ormskirk	A
Ossett & Horbury	A
Oswestry	A1
Oundle UD	A1
Oxford	A
Oxted	A1
Padstow	A1
Paignton	A1
Par	A1
Pembrokeshire (except Milford Haven)	A1
Penmaenmawr	A1
Penrith UD	A1
Penzance	A1
Peterborough, Soke of (Eastern Regional portion)	A1
Petersfield	A1
Pickering	A
Plymouth	A1
Pontefract MB	A
Pontypool & District	A
Pontypridd District	A
Porthcawl	A
Portishead	A
Portland Bill	A1
Portsmouth	A
Port Talbot	A
Preston	A
Princetown	A1
Pudsey MB	A
Pulborough	A1
Radnorshire, County of	‡A1
Ramsgate	A1
Raunds UD	A
Rayleigh	A
Reading	A
Redcar B	A
Redditch UD	A
Redhill & Reigate	A
Rhondda Valley	A
Richmond B (Yorks)	A
Ripon MB	A1
Rochdale	A
Rochester	A
Ross-on-Wye	A1
Rossendale Valley	A
Rotherham CB	A
Royston	A1
Rugby MB	A
Rugeley UD	A1
Rushden UD	A
Saffron Walden	A1
St. Albans	A
St. Austell	A1
St. Helens	A
St. Neots	A1
Salisbury City	A1
Salisbury Plain	A1
Sandy	A1
Sawbridgeworth	A
Saxmundham	A1
Scarborough MB	A
Scunthorpe MB	A
Seaford & Newhaven	A1
Selby UD	A
Sevenoaks	A
Shaftesbury	A1
Sheerness	A1
Sheffield MB	A
Shepton Mallet	A1
Sherborne	A1
Shipley	A
Shoeburyness	A
Shoreham	A
Shrewsbury MB	A
Sirhowy Valleys	A
Sittingbourne	A1
Skegness UD	A1
Skipton UD	A
Sleaford UD	A1
Slough, Windsor & Eton District	A
Smethwick CB	†A
Snettisham	A1
Solihull UD	A
Somerset, County of	‡A1
Southampton and Eastleigh	A
Southend-on-Sea Dist.	A
Southport	A
South Shields CB	A
Southwold	A1
Spalding UD	A1
Stafford MB	A
Staines	A
Stamford MB	A
Stantonwick	A
Stevenage	A
Stockport	A
Stockton RD	A
Stockton-on-Tees B	A
Stoke-on-Trent CB	A
Stoke Orchard	A1
Stourbridge MB	A
Stourport UD	A
Stowmarket	A1
Stratford-on-Avon MB	A
Stroud (RD Area)	A1
Sunderland CB	A
Sunningdale	A1
Sutton Coldfield MB	A
Swadlincote UD	A
Swaffham	A1
Swanage District	A1
Swansea	A
Swindon District	A
Swinton UD	A
Tamworth MB	A
Taunton	A1
Tavistock	A1
Tenterden	A1
Teignmouth	A1
Tewkesbury	A1
Thames Haven	A
Thetford	A1
Thirsk RD	A
Thorpe Bay	A
Thurrock UDC Area	A
„ North of to Billericay	A
Tilbury	A
Todmorden MB	A
Tonbridge	A1
Torquay	A1
Totnes	A1
Tring	A1
Trowbridge	A1
Truro	A1
Tunbridge Wells	A1
Tynemouth CB	A
Ulverston	A
Uppingham (Salop)	A1
Uttoxeter RD	A1
Uttoxeter UD	A1
Wakefield CB	A
Wakefield RD	A
Walsall CB	A
Wallsend B	A
Walsden	A
Walton-on-Naze	A1
Ware	A
Warminster	A1
Warrington	A
Warwick MB	A
Wednesbury MB	A
Wellingborough UD	A
Wellington UD	A
Wellington (Somerset)	A1
Wells (Norfolk)	A1
Wells (Somerset)	A1
Welwyn	A
Welwyn Gar. City	A
West Bromwich CB	A
Westbury	A1
Westcliff-on-Sea	A
Westerham	A1
West Hartlepool CB	A
Westmorland (except Kendal)	A1
Weston-super-Mare	A1
Weybridge	A
Weymouth (including Portland Bill, excluding Portland Stoneyards)	A1
Whitby UD	A1
Whitby RD	A1
Whitehaven	A1
Whitley & Monkseaton UD	A
Whitstable and District	A1
Wickford	A
Widnes	A
Wigan	A
Wigton	A
Wilmslow	A1
Wilts. County of	A
Wimborne	‡A1
Wincanton	A1
Winchester	A1
Windermere	A1
Wisbech	A1
Witham	A1
Withernsea UD	A1
Woking	A1
Wokingham	A1
Wolverhampton CB	A
Wolverton District	A
Woodbridge	A1
Woodhall Spa UD	A1
Woodstock	A1
Worcester CB	A
Workington	A
Worksop MB	A
Worthing	A1
Wrexham (incl. Cefn)	A
Wroughton	A1
Wylam	A
Wymondham	A1
Yate	A
Yeovil Borough	A1
York CB	A
Ystalyfera	A

*For Birkenhead, Liverpool and London the rates are:—Craftsmen, 4s. 7½d.; Labourers, 4s. 1d. In the case of London the rate beyond the 12-mile radius is: Craftsmen, 4s. 7½d.; Labourers, 4s. 0½d. †Plus 2d. per working day. ‡This is the County rate and applies except where higher grades are stated.

NOTE.—Carpenters and Joiners providing own tools when employed in establishments operating under the Supplementary Rules for Woodworking Factories and Shops, receive 2d. per day; when employed on other building industry work, 4d. per day.

WOMEN'S RATES.—In all districts throughout the country the rate of wages for women engaged in craft processes is 3s. 7½d. per hour. Women engaged on work other than craft processes, 3s. 3½d. per hour.

For Building Trade Wages in Scotland see page 1112

The Builder Review of PLANT & MATERIALS

A Portable Lifting Gantry

THE 'Colossus' is the name given by Anderston Clyde Engineers, Ltd., Field-road, Busby, Glasgow, to their new portable self-lifting gantry. It can be used wherever there is a question of dealing with heavy loads for hoisting, lowering, loading and shifting. It can also replace a stationary unit, since it offers great advantages because of its mobility. Particular applications are moving heavy machine tools, building work, laying pipelines and garage uses. The cross-beam, which is constructed in five sizes, one to 20 tons, is also easily adjustable to give more headroom under the gantry. The setting up and dismantling of the 'Colossus' is very simple; for instance, two men can erect a five-ton gantry complete with either hand or electric lifting gear in only five minutes.

Fire and Frost Resistance Tests

'Thermalite-Ytong' lightweight building blocks made by Thermalite, Ltd., Shepherds House-lane, Earley, Reading, were the subject of tests carried out by the Joint Fire Research Organisation. These tests show that, in accordance with BS specifications, it is incombustible; that a 4 in. non-loadbearing wall has a fire resistance of the four-hour grade, while a 4 in. loadbearing plastered wall has a fire resistance of the two-hour grade. These figures are high compared with other walling materials: for example, to achieve the six-hour grade of a 5 in. Thermalite-Ytong wall a 9 in. brick wall would be required. Although there is no relevant BS test for frost resistance Thermalite-Ytong has been subjected to laboratory tests in comparison with common brick and good quality facing brick. The common bricks were deemed useless after 20 cycles of saturation, freezing and thawing, and the facing bricks after 60 cycles. Similar tests on Thermalite-Ytong blocks of the same dimensions removed some small flakes from their surface and left them otherwise undamaged.

Mastic Gun

'Seco G' is the name given to the new mastic gun manufactured by Secomastic, Ltd., Bracknell, Berks. They claim that, owing to the overhead fulcrum and multiple catch plate assembly which transmits the trigger thrust to the plunger, the mechanical efficiency is increased by some 35 per cent. Also, the trigger and handle have been scientifically reshaped so that operating efficiency is further increased by enabling the operator to exert maximum pressure, comfortably, whatever the position of the trigger within its operating arc.

A Portable Tamper-Finisher

The 'R.G.A.' is a new self-contained petrol-engined portable tamping and finishing machine by Machinery (Continental), Ltd., 175, Brompton-road, Knightsbridge, London, SW3, designed for smoothing and finishing all types of concrete floorings.

TRADE NEWS

For Aluminium Users

THE Northern Aluminium Co., Ltd., Banbury, Oxon, have produced a handy new reference guide. This booklet, *Noral Products—Tables of Weights*, is intended to provide a ready source of information on the weights of many of the aluminium products—sheet, corrugated sheet, plate, circles, bar, tubes and wire—manufactured by the company. Designed for easy wall-mounting where required, the 11 in. x 8½ in. thumb-indexed booklet is a useful reference.

Technical Publications Received

Noral Snaprib Sheet, a clearly illustrated booklet by Northern Aluminium Co., Ltd., Banbury, Oxon. *The Stramit Advertiser*, a newspaper type house journal from Stramit Boards, Ltd., Cowley Peachey, Uxbridge. *Kynal Profiled Sheets for Building* is a descriptive booklet produced by ICI Metals Division, PO Box 216, Birmingham, 6. *Woodworking Machinery*, the catalogue of A. Crooksley, Ltd., 21-25, Tabernacle-street, London, EC2. *Kingmag*, the very entertaining house magazine from Kingston (Architectural Craftsman), Ltd., Minster Works, Hull. *Muragard Curtain Wall*, an easily followed reference folder by the makers, Gardiner, Sons and Co., Ltd., Broad Plain, Bristol, 2. *The Rayburn No. 2*, a leaflet concerning the latest convector fire from Allied Ironfounders, Ltd., 28, Brook-street, London, W1. *Marley Concrete Buildings* is a new booklet from Marley Concrete, Ltd., Sevenoaks, Kent. *Easilyne Taps and Fittings* features the products of Sanbra, Ltd., Aston Hall-road, Birmingham, 6.

Bournemouth Depot

British Insulated Callender's Cables, Ltd., announced the opening of a new depot at 511, Roumelia-lane, Boscombe, Hants (telephone Boscombe 36223) on Monday, November 25. The stocks held include a comprehensive range of wiring types of cables and accessories.

Concrete Mixer Take-over

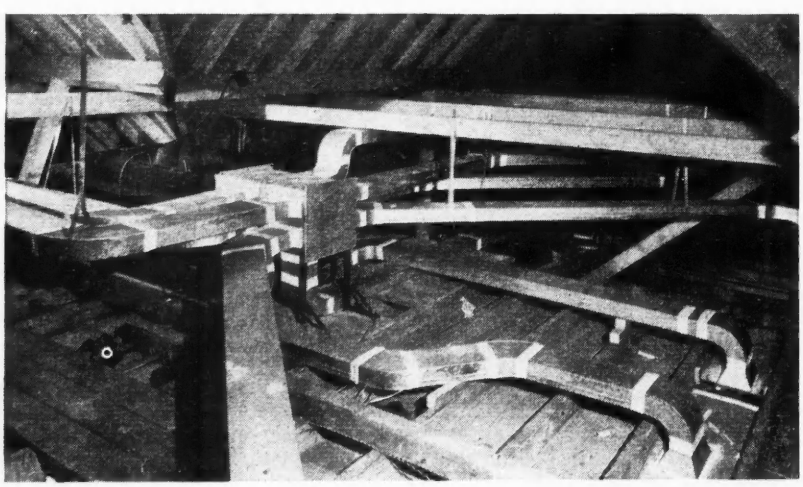
As from November 1, 1957, Barford (Agricultural), Ltd., Belton, near Grantham, Lincs., have taken over the manufacture and sales of the whole range of Goodwin-Barsby concrete mixers. These are now known as the Barford (Good-Win) mixers.

Export Success

After tests and negotiations extending over two years, ATAC, the Municipal Traffic Combine of the City of Rome, has decided to standardise entirely on pressure-charge-operated fire extinguishers and has placed its first order. ATAC, which has 15,000 employees and is reputed to be the largest surface passenger transport organisation in Europe, has previously used Italian-made extinguishers. The extinguishers chosen are made by Nu-Swift, Ltd., Elland, Yorks.

Acoustic Board Distributors

Following their recent announcement regarding the arrangements for the distribution of Ankarboard Acoustic Boards and Tiles, Martin Olsson and Sons, Ltd., advise us that their main distributors for Scotland are Scottish Speedwell Co., Ltd., Glasgow, and for Northern Ireland James P. Corry and Co., Ltd., Belfast. Martin Olsson and Sons act as sole selling agents for Ankarboard Acoustic Boards and Tiles on behalf of the manufacturers, Svenska Cellulosa A/B of Sweden.



FORCED WARM-AIR HEATING.—This system, known as the 'Pak-a-way' heating, and ventilating system is claimed to have the following advantages. The heat output is thermostatically controlled; the system is draughtless, easy to install; requires no pipes, radiators or floor space in the room; introduced air is filtered; it provides summer ventilation and the distribution system uses standard air diffusers, small air ducts and fittings. The manufacturers are The Package Heater Co., Ltd., 268, High-road, Harrow Weald, Middlesex

NEWS IN BRIEF

Opposition to Park Lane Bill

MARYLEBONE MBC, at their meeting yesterday (December 19) were recommended by the Council's general purposes committee to oppose the Park Lane Improvement Bill and also 'to pass such other resolutions as may be necessary or expedient in connection with the opposition of such Bill.' The Bill was read a second time in the Commons on December 11.

New FIDOR Member

The Fibre Building Board Development Organisation announce that Messrs. Panelwood, Ltd., Aycliffe Estate, near Darlington, has joined the organisation as an associate member.

Special Courses

The Department of Management Studies of The Polytechnic, Regent-street, W1, is offering several day-time courses on economics, finance, work study and communication of importance to management, beginning on January 6. Further information and enrolment forms can be obtained from the Registrar, St. Katherine's House, 194, Albany-street, NW1.

Fall in Material Prices

There was a further fall of 1.7 per cent. between October and November in the basic wholesale materials index, states the *Board of Trade Journal*. The slight downward trend noted the previous month (see *The Builder*, November 29, page 967) continued in building materials. The November index for building and civil engineering materials was provisionally placed at 147.8 (June 30, 1949=100) compared with 147.9 in October, and for house building materials the indices were, respectively, 146.8 and 146.9.

Birmingham Housing

Municipal house building in Birmingham is not to be cut in 1958. In approving the completion next year of 2,400 houses, costing nearly £6,000,000, the City Council's House Building Committee have felt it necessary to ignore the Government's proposed 20 per cent. cut. Councillor W. H. Milner, chairman, said it was impossible even to contemplate reduction in the building rate. The programme this year is up to schedule. On November 30 houses completed in 1957 totalled 2,319, which left 125 to be finished during December. The 1958 programme comprised 364 one-bedroomed, 696 two-bedroomed, 1,318 three-bedroomed and 29 four-bedroomed houses, 55 shops and 350 garages.

Building and Integrity

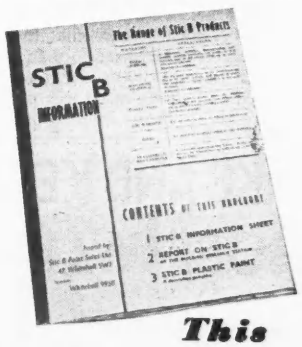
Stockton's Borough Architect, Mr. T. C. Hartley, ARIBA, speaking to students at the Building Department of Stockton-Billingham Technical College at their annual prize and certificate distribution held recently, said that building of any kind was a matter of teamwork, and to be a success it must have integrity from directors to labourers. The standard was only up to the strength of the weakest link in the chain. He assured students there was still plenty of work in the Stockton area. Stockton Corporation did not intend to extend its housing plans at the moment, but there was a lot of work outstanding, and if the Bank Rate was reduced more housing might be started. Work on schools had still to be carried out.

Aluminium Bungalows

Maltby Urban Council decided at their meeting on November 25 to send a deputation to the Ministry of Housing urging that the 'permanent' aluminium bungalows in the township should be declared 'temporary.' The housing manager and surveyor had inspected the 40 aluminium bungalows in Bevan-crescent and it was clear they could not last 60 years, which was the period of loan sanction. In two bungalows floors had been taken up and shown even more corrosion. To avoid further deterioration major repairs would have to be done at the cost of several thousand pounds, and some of the bungalows were not expected to be habitable in two years' time unless major repairs are carried out.

Plumbing Scholarships

Six National Plumbing Scholarships for 1957 have, under the auspices of the Plumbing Trades National Apprenticeship Council, been awarded as follows: Area No. 1—D. A. Blundell (Surrey) and C. W. J. Lear (Kent). Area No. 2—C. W. Helley (Bristol). Area No. 3—A. Holley (Oxford) and G. S. Wilson (Leeds). Area No. 4—D. B. Halley (Edinburgh). Applications for the 1958 Scholarships are now invited. All applicants must have passed the City and Guilds' Final examination in Plumber's Work, or its equivalent. Details are available from the Secretary, 15, Abbeville-road, Clapham, SW4.



This book tells you how to paint new concrete, new cement, etc.

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OVERSEAS BUILDING

From Our Own Correspondents

BURMA.—Unilever of London are to form a joint company with the Union of Burma in a $14,800,000 enterprise for the manufacture of soap. Construction of a factory outside Rangoon will begin shortly, to be ready for production in 1959.

JAPAN.—Plans are being prepared in Tokyo for a new palace for the Crown Prince of Japan. The £300,000 residence will cover 53,370 sq. ft. on the site of a former Empress Dowager's palace at Aoyama, Tokyo, partially destroyed in the Pacific war. It will take two years to build.

Canadian Subsidiary Formed

A new company—Vickers-Armstrongs (Tractors) Canada, Limited—has been formed, with its registered office in Montreal. It is the Canadian subsidiary of Vickers Armstrongs (Tractors), Limited, England. The new company already has a depot in Vancouver and will shortly open a second depot in Toronto. The Vancouver depot will serve provinces west of Ontario.

The first directors are:—Mr. W. J. R. Cupples, CA (commercial director, Vickers-Armstrongs (Tractors), Limited); Mr. L. J-B. Forbes; Mr. J. Mossop, FCIS; Mr. A. P. Wickens, MIMechE (managing director, Vickers-Armstrongs (Tractors), Limited). Secretary of the company is Mr. J. M. Anderson.

Credit Restrictions Eased

Easing of credit restrictions in Australia was announced on December 10 by the Commonwealth Bank. Trading banks have been advised to increase credit advances except for extended hire purchase or instalment selling. Many industrialists are now expected to renew applications for advances previously turned down.

One expected outcome of the liberalised credit policy is an upsurge of home building. A building industry spokesman said that the flow of fresh capital might halt the recession that was threatening the industry.

Announcing the new policy, the Commonwealth Bank said it was due to adverse seasonal conditions and the need to maintain a balanced growth and stability in the economy. The president of the Rural Bank of New South Wales, Mr. McKerihan, commented: 'This is the first sign for years of any real easing of credit in Australia.'

Service After Sales

Mr. H. Sissons, a member of the Canadian Trade Mission now visiting Britain, speaking at Newcastle recently, stated: 'British manufacturers exporting to Canada must give an after-sales service as good as we get at home. Our people do not feel they can buy here unless they get such service.'

He instanced the setting up of a non-manufacturing company in Canada by a Newcastle firm who had given service that was in some ways better than that which could be had from the USA. This firm was willing to fly men to Canada and had done so many times. This was something that other manufacturers in Britain had not faced up to.

CONTRACT OPEN

Iraq.—The Eastern Bank, Crosby-sq., EC3, inform us that their Bagdad branch has received details of a Government of Iraq contract for the expansion of the Qalyarah Refinery. Tender documents may be obtained from the Iraqi Embassy, London, on payment of 1D.25s. or its equivalent. Tenders to the Chairman, Board of Directors, Government Oil Refineries Administration, The British Bank of Middle East Building, Bagdad, by May 1.

TRADE FAIRS IN BRITAIN

Inquiry into Future Needs

AN INQUIRY just completed by the Federation of British Industries into the future of trade fairs in Britain shows that the vast majority of trade associations are opposed to the development in this country of a general international fair covering a wide range of industrial products, similar to those held in most European countries. They favour, instead, the continued development of specialised fairs, i.e., fairs covering the products of a particular industry. Some 60 such specialised fairs are already held in this country every year.

Of 109 trade associations whose members are concerned with trade fairs, 105 favoured specialised fairs and only two showed any decided preference for general fairs. A substantial number indicated that they would like to see the scope of specialised fairs widened sufficiently to allow for the grouping of the products of allied industries.

The inquiry also revealed that opinion was about equally divided on the question whether specialised trade fairs in Britain should be national or international. This corresponds with the facts of the present situation. Of the 60 specialised fairs held each year in this country about half are national and the other half international.

The FBI inquiry was made in response to a request from the President of the Board of Trade to let him have the opinions held in British industry about future policy on trade fairs in Britain. This arose because the London branch of the British Industries Fair had ceased to operate and the Birmingham Chamber of Commerce had announced that there would be no Birmingham BIF next year and that it would no longer be responsible for such a fair on the existing all-British basis. It asked the Government to go into the question of organising an international fair.

The results of the inquiry have been communicated to the President of the Board of Trade and to the Birmingham Chamber of Commerce.

Midlands Safety Conference

The Midland Federation of Building Trades Employers have arranged to hold a Federation Safety Conference in Birmingham on January 22 next. It is to be held at the Queen's Hotel, Birmingham, at 2.30 p.m., and will be opened and addressed by the Lord Mayor of Birmingham, Alderman J. Grogan. Speakers at the conference will include Mr. R. Bramley Harker, HM Deputy Chief Inspector of Factories, and Mr. Peter Trench, OBE. The conference is open to all interested in this important subject.

The SCOTTISH BUILDER

Stone in Building

THE recent attention to stone as a building material in Scotland has encouraged a hope that official action may follow. The Department of Health for Scotland has indicated that housing schemes which allow for some use of stone have been approved in the past six months for eight towns and one village in Scotland. These are cases where construction will be in part stone/part brick, or where stone will be used as a facing material.

These approvals stem from the issue of the Department circular in 1956 which allowed for the use of stone at an increased cost, at the preference of the authority concerned; their purpose in making this ruling was to encourage stone construction and the use of varied materials in schemes so as to avoid excessive uniformity of appearance. The Department has not given major support to the complete use of stone as a building material on economic grounds.

In the case of the North of Scotland Hydro Electric Board some excellent work has been done in the Highlands using local stone in its native setting.

£3m. Modernisation Plan Progress

MR. FOSTER M. STEWART, managing director of the North British Rubber Co., Ltd., Castle Mills, Edinburgh, disclosed recently at a Press conference that the company's £3 million modernisation plan for the erection of a new 145,000 sq. ft. one-storey factory building in Edinburgh was progressing favourably. Demolition work was almost complete and work on the foundations begun. At the company's Heathhall plant in Dumfries, a similar major expansion was under way.

Messrs. George Davie, Crawford and Partners, Glasgow, are advising on technical matters for new mechanical plant and Messrs. Strain and Robertson, Glasgow, on the steam boiler plant required for the new factory.

New Factory for Clydebank

AN Australian company, Ralph Symonds, Ltd., of Sydney, which manufactures marine plywood and prefabricated building materials, is to set up a factory in Clydebank, near Glasgow. The company will produce the plywood for the British market and for export to Europe and the USA. Chairman of the company, Mr. Ralph Symonds, said the factory will produce the largest sheets of plywood in the world. They will measure 50 ft. by 9½ ft., and be used for the sides of houses. He expects the factory to be in production in about 12 months.

SCOTTISH BUILDING TRADE WAGES

FOLLOWING are rates of wages authorised by the Scottish National Joint Council as from May 27, 1957. They apply to the whole of Scotland, including the islands of Orkney, Shetland, etc

Grade A: Craftsmen 4s. 6d.; Labourers 3s. 11½d.

For apprentices, the rates are:

Year.	*Percentage of Craftsman's rate.*	*For week of 44 hours.*
		s. d.
1st	25	49 6
2nd	33⅓	66 0
3rd	50	99 0
4th	66⅔	132 0
5th	75	148 6

For female labour, the rates are:

	s. d.
Operatives on craft operations (at end of probationary period)	3 11½
Operatives on labouring operations (at end of probationary period)	3 5½

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NEW BUILDINGS

Argyll CC.—All trades basis. (1) Erection of 21 houses at Bowmore, (2) 4 at Blairmore and 3 at Innellan, (3) 4 at Strontian, (4) 28 at Lochaline, (5) 18 on three sites at Tiree, (6) Extension to school at Ballachulish, (7) A school, 3 shops and 24 houses at Dunbeg, nr. Oban, (8) Extension to Kilninver school. Applications to County A, County Offices, Dunoon.

Barrhead.—78 houses at Kerr-st. and Gertrude-pl. Applications to William Baillie & Son, 4, West Regent-st., Glasgow.

Dumfries.—Extensions to St. Joseph's College, to include assembly hall, four laboratories, dormitories and music rooms, approved by the Dean of Guild Court. Est. cost £110,000.

Kirkcaldy Victoria Hospital.—Dining rooms and kitchens—separate trades or 'several works' tenders invited. Applications to the Secretary, South-Eastern Regional Hospital Board, 11, Drumsheugh-gdns., Edinburgh 3.

Kilmarnock.—Tenders invited for several works in connection with erection of cleansing depot buildings at Western-rd. Applications to R. Armour & Ptnrs., 54 Bank-st.

Paisley.—Reconstruction of main traffic routes following abandonment of tramways. Schedules from J. A. McGregor, Burgh E, 14 Gilmour-st.

Paisley.—Dean of Guild Court approved plans for freezing and storage plant for James Robertson and Sons, Ltd., at Stevenson-st., at a cost of £45,000.

The Builder

FUTURE CONSTRUCTION

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

DECEMBER 23.

***†Oxford City C.**—15 houses on two sites at Headington Quarry. City Architect and Planning Officer.

DECEMBER 24.

†Bury CBC.—Grammar/tech. sch., 900 places. A: Bradshaw, Gass & Hope (F/F), 19 Silverwell-st., Bolton. Dep. £5 5s. Tenders by February 11.

***†Leeds Regional Hospital Board.**—Alterations and extensions at Bootham Park Hospital, York. Architect to the Board, Park-parade, Harrogate. Dep. £2 2s. Tenders by January 20.

DECEMBER 27.

***†Oxford City C.**—Hostel for old people at Horspath-rd. City A and Planning Officer.

***†Plymouth City C.**—16 flats at Woolster-st./Palace-st. City A. Dep. £3 3s.

DECEMBER 30.

***Merthyr Tydfil CB.**—Public convenience at Calon Uchaf. BE. Dep. £2 2s.

***†Northants Standing Joint Committee.**—Three pairs of police houses at Kettering and three pairs at Wellingborough. County A.

***Smethwick CB.**—Retiling of roof to Brasshouse-la. infants' sch. BE&S. Dep. £2 2s.

DECEMBER 31.

***†Essex CC.**—Erection of extensions at Maldon gram. sch. (est. cost £47,000). County A.

***†Essex CC.**—County Supplies Depot at Widford, Chelmsford (est. cost £200,000). County A.

***†Hants CC.**—Erection of: Basingstoke Technical College (phase 1); Havant county grammar school; Eastleigh Technical College. C, The Castle, Winchester.

***†Middlesbrough CB.**—Erection of High Schools for Boys and Girls. Director of Education, Education Offices, Woodlands-rd. Dep. £5 5s. Tenders by Feb. 14.

***†Newcastle Regional Hospital Board.**—Hostel for Medical Officers at Middlesbrough General Hospital. Secretary to the Board, Benfield-rd., Newcastle-on-Tyne, 6.

***†West Sussex CC.**—Alterations, additions and improvements at Midhurst Grammar Sch. (Job No. 4816). County A.

***†West Sussex CC.**—Fixed price tender for extension of Horsham Greenways Prim. Sch. (Job No. 5054). County A.

JANUARY 3.

Eastleigh BC.—12 old people's bungalows at Westfield-cres., Velmore housing estate. Boro' E&S. Dep. £2 2s.

JANUARY 6.

***†Bedford BC.**—Three 12-storey blocks comprising 68 flats and stores in the central area. BE&S. Dep. £5 5s.

***†Durham CC.**—Additional accommodation, Burnopfield mod. sch.; heating and d.h.w. installations and metal windows, Hartlepool West View new county jun. sch.; three police houses and office, Clyde-ave., Monkton-la., estate, Hebburn. County A.

Manchester City C.—234 dwellings at Hazelgr. overspill area: 11 at Catterick-rd., Didsbury; 19 at Crosby Farm, Charlestown; 6 at Ferndene-rd., Withington, and 11 at Darley-ave., West Didsbury. Director of Housing.

***†Portsmouth City C.**—(a) Laboratory, Copner mod. boys' sch.; (b) Laboratory (No. 2), Hilsea mod. girls' sch.; (c) Six flats, Eastern-rd. City A. Dep. £1 each contract.

***Walsall CB.**—One block of 12 bed-sitting room flats at Alumwell estate. BE&S. Dep. £2 2s.

JANUARY 8.

Royton UDC.—28 aged persons' dwellings, warden's house, communal baths and communal rooms at Luzley Brook. Ccl's A: Heywood & Ogden, 12 Clegg-st., Oldham. Dep. £2 2s.

JANUARY 13.

***Dartford BC.**—52 garages at 4 sites at Temple Hill Neighbourhood Unit. TC. Dep. £2 2s. (Fixed price tender.)

***Eccles BC.**—Six flats at junction of Trafford-rd. and Ashbourne-rd. BE&S. Dep. £2 2s.

***Warrington CB.**—Erection of health clinic at Garven-pl., Sankey-st. BS. Dep. £2 2s.

JANUARY 14.

***Bradford City C.**—Ten aged persons' bungalows with site works at Thorpe Edge estate. City E&S. Dep. £2 2s.

Welton RDC.—Eight houses and 12 bungalows at Bardney. A: William Saunders & Ptnrs. (L), 24 Castle Gate, Newark, Notts. Dep. £3 3s.

JANUARY 16.

***Bletchley UDC.**—Erection of (a) factory No. 7 and (b) factory No. 9 at the Industrial Estate adjoining Watling-st. E&S. Dep. £5.

JANUARY 20.

***Salford City C.**—Classroom, store and covered way at North Salford Sec. Mod. Sch. for Girls. City E&S. Dep. £1 1s.

JANUARY 25.

***Heston and Isleworth BC.**—Resurfacing of wood floors at various schools. BE&S, 88, Lampton-rd., Hounslow.

FEBRUARY 4.

***Grimsby CB.**—Children's Reception Centre at Grange estate. BE&A. Dep. £2.

***Lindsey (Lincs) CC.**—Erection of Grammar Technical Sch., Scunthorpe. County A., County Offices, Lincoln. Dep. £5 5s.

NO DATE.

***Smethwick CB.**—Erection of special school at Arden-rd. BE&S. Dep. £2 2s.

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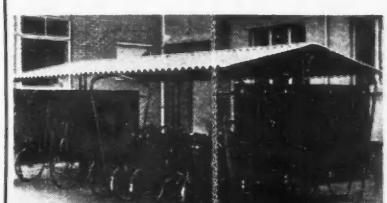

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PAINTING, MATERIALS, ETC.

JANUARY 1.

***†Leeds Regional Hospital Board.**—Extension of steam main and installation of condense main at Storthes Hall Hospital, Kirkburton nr. Huddersfield. Architect to the Board, Park-parade, Harrogate. Dep. £2 2s.

***†Leeds Regional Hospital Board.**—Mechanical engineering services at St. John's Hospital, Keighley. Secretary to the Board, Park-parade, Harrogate. Dep. £2 2s.

JANUARY 3.

Scunthorpe BC.—Road materials. Boro' S.

JANUARY 6.

Birkenhead CBC.—Road materials. Boro' E&S.

Hertfordshire CC.—Road materials. County S.

JANUARY 11.

Dagenham BC.—Road and building materials. Boro' E&S.

Ruislip-Northwood UCD.—Road materials. E&S.

JANUARY 14.

***Dorking UDC.**—2,000 lin. yd. of palisade fencing and gates to council houses. E&S. Dep. £2 2s.

JANUARY 16.

Wimbledon BC.—Road and building materials. Boro' E.

JANUARY 17.

***Brentford and Chiswick BC.**—Supply of materials. TC.

Maidenhead BC.—Road materials. Boro' E&S.

JANUARY 18.

Hertford BC.—Road materials. Boro' E&S.

Sevenoaks UDC.—Road materials. E&S.

JANUARY 24.

***Cambridge City C.**—External painting of 1,145 dwellings at various sites. City S.

NO DATE.

Middlesex CC.—Road works and materials. County E&S.

MUNICIPAL AND CIVIL ENGINEERING WORKS, ETC.

JANUARY 2.

Pontypridd UDC. — Road improvement works between Ebenezer Chapel and Duffryn Arms, Rhydyfelin, on Cardiff-Merthyr Tydfil-Llangurig trunk road, A.470. E&S. Dep. £2 2s.

JANUARY 6.

Pontypool RDC.—5,550 yd. of 3 in. dia. CI pipes and 220 yd. of 1 in. dia. copper pipes. Thomas & Morgan & Ptnrs., constg. engrs., 23 Gelliwastad-rd., Pontypridd. Dep. £3 3s.

Reading CBC.—11,300 sq. yd. carriageways with foul and s.w. sewers in private streets in two groups. Boro' S. Dep. £2 2s. each group.

Trent River Bd.—Flood protection works partly in Sandiacre, Derbyshire, and partly in Stapleford, Notts.—390 lin. yd. r.c. river channel and 260 lin. yd. mass concrete retaining wall, including driving of 130 tons of sheet steel piling, earth-moving, drain outfalls and access bridges. E. Dep. £5.

JANUARY 9.

Newquay UDC.—825 yd. of spun-iron and concrete sewers, 15 in. to 24 in. dia. (240 yd. in heading), with manholes, etc. Lemon & Blizard, Ccl.'s constg. engrs., 1, Glenside, College-ave., Plymouth. Dep. £4 4s.

JANUARY 18.

Meriden RDC.—1,000 yd. of 6 in. dia. foul sewers and sewage disposal works at Birkswell. E&S. Dep. £3 3s.

JANUARY 20.

Dorchester RDC.—Portesham and Abbotsbury water supply—10,000 yd. of 5 in., 4 in. and 3 in. dia. spun-iron and asbestos-cement water mains, 100,000 gallon r.c. reservoir, etc. W. Herbert Bateman & Ptnrs., Chesterfield-hse., Batheaston, Bath. Dep. £5 5s.

JANUARY 21.

Chanctonbury RDC.—Main drainage of Pulborough—16,000 lin. yd. of 6 in. to 12 in. dia. sewers and rising mains, four sewage pumping stations, etc. Howard Humphreys & Sons, Ccl's constg. engrs., Victoria Station-hse., Victoria-st., SW1. Dep. £5 5s.

JANUARY 22.

Kerrier RDC.—Fixed price tenders for Stithians water scheme (first instalment): 13 miles of 3 in. to 8 in. dia. spun-iron mains

with flexible joints. Herbert Lapworth Ptnrs., 25 Victoria-st., SW1. Dep. £5.

JANUARY 24.

Lurgan and District Waterworks Joint Bd.—Remedial works at Ballydugan and Magheraliskmisk reservoirs. Binnie, Deacon & Gourley, Bd's engrs., Artillery-hse., Artillery-row, SW1. Dep. £5.

JANUARY 25.

Pickering UDC.—8¼ miles of 8 in.-3 in. dia. iron pipe water mains from Ryedale Joint Water Bd's main to Pickering. Elliott & Brown, Ccl's constg. engrs., Stanley-hse., Pelham-rd., Nottingham. Dep. £5 5s.

Ryedale Joint Water Bd.—(1) 20,100 yd. of 10 in. dia. CI main from Hildenley, nr. Malton, to Swainsea-la., Pickering. (2) 300,000-gallon mass concrete service reservoir at Swainsea-la., Pickering, with ancillary works. D. H. Moore, MInstCE, Bd's constg. engr., 12 Valley Bridge-parade, Scarborough. Dep. £5 5s. each contract.

JANUARY 27.

Kingsclere and Whitchurch RDC.—North-Eastern area water supply—4½ miles, with possible further 3½ miles, of 4 in. dia. spun-iron water mains, with valves and fittings, etc. Lemon & Blizard, Ccl's engrs., 59 Tufton-st., SW1. Dep. £3 3s.

MARCH 17.

Tees Valley Water Bd.—Complete rapid gravity filtration and treatment works at Lartington, nr. Barnard Castle, capacity 16m. gallons a day. E. Dep. £10 10s.

GENERAL BUILDING WORK

(LONDON)

Camberwell.—SITE ACQUISITIONS.—The LCC Housing Com. proposes to acquire areas about 1.08 acres in extent at Redcar-st., SE5, by compulsory purchase. It is estimated that 198 dwellings can be erected on the lands after clearance.

Dagenham.—HOUSES AND GARAGES.—The LCC Housing Com. proposes to develop a site at Rainham-rd. North, adjoining Becontree estate, by nine houses and 14 prefabricated garages, at an estimated cost of £24,700.

Holborn.—MODERNISATION OF FLATS.—The LCC Housing Com. has approved a scheme for the modernisation of Scrope Building, Bourne estate, by the conversion of the existing 50 two-room and five three-room flats into 12 one-room, 10 two-room and 12 three-room flats at a cost of £41,550.

Stepney.—MAISONETTES AND GARAGES.—The LCC Housing Com. has approved proposals for the development of the Kilner-st. areas and site of about two acres by four four-storey blocks containing 68 maisonettes, grouped round an open space, with 17 garages, 33 tenants' stores and a play space. The estimated cost of the development is £177,100.

Stepney-Poplar.—FLATS, MAISONETTES AND GARAGES.—The LCC Housing Com. has approved proposals for the development of two sites totalling 2.1 acres forming part of the Lansbury neighbourhood in the Stepney-Poplar comprehensive development area. On the triangular site bounded by Pelling-st., Farrance-st. and Stainsby-rd., a three-storey block of 21 one-room flats will be erected and on a site to the east of Stainsby-rd. there will be a 10-storey block of flats and maisonettes, served by two lifts and having electric floor heating. Twenty tenants' stores, 12 garages, a car-park and a play space will also be provided. The estimated cost of development is £217,900.

Westminster.—OFFICES AND GARAGE.—Redevelopment of the whole of the island site between Victoria-st. (Nos. 1-19), Abbey Orchard-st. and Great Smith-st. by two interconnected blocks of offices is proposed by the Legal and General Assurance Co. One block will be T-shaped and nine-storeys high, with basement and private garage for 174 cars in the sub-basement. The adjoining block will be a six-storey building and the whole scheme will provide 400,000 sq. ft. of floor space at an estimated cost of £4 million. An outline planning application is before the LCC. The architect for the scheme is Ronald Fielding (A), Aldwych-hse., WC2.

(PROVINCIAL)

Abram.—UDC to prepare plans for 20 flats, 10 houses and 20 aged persons' dwellings.

Aspull.—UDC proposes erection of 32 houses.

Bangor.—North Wales Counties Training College proposes extensions to premises. A: Glover & Ptnrs., Francis-hse., Francis-st., SW1.

Berwick.—TC is considering erection of 12 houses for single persons at Woolmarket. Boro' E: J. A. Armitage.

Billingham-on-Tees.—UDC is proposing housing developments at Low Grange and sketch plans are to be prepared. S: E. Shaw, Council Offices, Haverton Hill-on-Tees.

Birmingham.—TC approved scheme for 25 dwellings at Garretts Green estate, Sheldon, and erection of 9 shops and 14 houses at Leach Green-la., Rubery.

Birtley, Co. Durham.—Gorrills, Ltd., Tyre-hse., Corporation-st., Newcastle-on-Tyne, propose factory and office accommodation at Vigo-la.

Blackburn.—Ministry of Works propose new multi-storey office block at Duke-st. car park.

Bury.—TC approved plans for erection of new motor car showroom at 101 Bolton-st., Bury.

Buxton.—BC approved plans: alterations at 'The Bull's Head,' Fairfield, for Thompson & Evershed, Ltd.; residential development at Watford-rd. for Cavendish Golf Club, Ltd.; residential development off Duke's-dr. for Trustees of Chatsworth estate; residential development at Burbage old golf links for R. K. M. Siddall.

Carlisle.—TC proposes erection of shops at Morton estate and at Westrigg-rd.

Carlton.—Notts CC proposes erection of new College of Further Education at Digby-ave.

Chester-le-Street.—UDC seeks loan sanction for £110,000 for proposed extensions to local sewage disposal works. No tenders yet invited. Constg. engrs.: D. Balfour & Sons, 145, Pilgrim-st., Newcastle-on-Tyne.

Congleton.—Manchester Regional Hospital Bd. proposes extensions to midwifery department at War Memorial hospital, £17,000 est.

Consett.—UDC approved road works and 50 or 60 houses at Moorside. S.

Driffield, Yorks.—UDC approved plans for extensions to factory at Little Driffield for Yorkshire Egg Producers, Ltd.

Dudley.—BC to prepare plans for branch library at Old Park estate.—Approved layout for 18 bungalows at Meadow-rd. site.

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Durham.—CC to begin work next year on £250,000 scheme for extensions to Neville's Cross training college, which will be doubled in size. Proposed extensions include residential accommodation for 115 students and staff, gymnasium, two science laboratories, new dining-hall and kitchen, etc. County A: G. R. Clayton (F), South-st., Durham.

Durham.—F. M. Owsnett, 8 Bedford-st., Sunderland, appointed constg. engr. by Durham CC for proposed Ushaw Moor mod. sch.

Durham.—EC hopes to complete in two or three years second stage of technical college at Framwellgate Moor. £500,000 est. County A.

East Retford.—RDC to prepare plans for further 4 houses at Hayton and new housing scheme at Finningley.

Halesowen.—TC approved plans for rebuilding 'Old Crown' inn at Mapletree-la. for Wolverhampton & Dudley Brewery, Ltd.

Hiraethog.—RDC proposes 6 houses and 6 bungalows at Cerrigydrudion. A: J. Isgoed Williams (L), Pant Yr Afon, Penmaenmawr.—Ministry of Works propose erection of automatic telephone exchange at Salisbury-terr., Llanrwst.

Keighley.—EC proposes extensions to girls' gram. sch. at Utley.

Lancaster.—Governors of Royal Grammar School propose conversion of male casual reception centre, Bay View, Lancaster, into new physics laboratory. A: C. B. Pearson & Son (F), 18 Dalton-sq., Lancaster.

Macclesfield.—TC approved erection of office block and workshop at Hurdsfield industrial estate for Bramhall Engineering Co., Ltd., Manchester.

Manchester.—Co-operative Insurance Socy., Ltd., to erect new head offices on site bounded by Corporation-st. and Miller-st. A: G. S. Hay (A), CWS Architects' Dept., 1 Balloon-st., Manchester 4, in association with Sir John Burnet, Tait & Ptnrs. (F/F), 10 Bedford-sq., WC1.

Middlesbrough.—TC to consider building of art gallery and sketch plans have been made of proposed site. Boro' E: J. Kenyon.

Millom, Cumberland.—RDC intends carrying out £185,000 scheme for improving water supply system in northern area of district.

Newcastle-on-Tyne.—City Trade and Commerce Com. is considering report that part of Newcastle Quay is slipping, and that repairs will cost about £200,000. City E: P. Parr, Town Hall, Newcastle.

Newcastle-on-Tyne. — Ministry inquiry arranged into appeal by William Leech, Ltd., builders, St. James-st., Newcastle-on-Tyne, against City C's refusal to sanction erection of houses south of Fawdon-la.

North Riding.—Plans for prim. sch. at Catterick Camp have been prepared by Johns, Slater & Howard (F/A), 32 Foundation-st., Ipswich.

Norwich.—RC Authorities propose new sec. mod. sch., £50,000 est.

Richmond, Yorks.—Plans to be prepared for two-storey block of houses at Temple View. Boro' S: A. Anderson (A).

Rotherham.—RDC to prepare plans for 40 dwellings for slum clearance and 80 dwellings for general needs on various sites.

Scarborough.—North Riding CC is being recommended to construct ante-natal clinic, child welfare centre, and dental clinic at Eastfield estate, Scarborough, at cost of £12,000. County A: H. J. Knowles (A), County Hall, Northallerton.

Sheffield.—TC approved erection of factory at Matilda-st. for Slack & Barlow (Sheffield), Ltd. A: Oxley & Bussey (A/A), 91 Pinstone-st., Sheffield.

South Shields.—TC has allocated sites to J. Aitchison & Co., Ltd., and J. Deuchar, Ltd., for licensed premises at Gainsborough-ave. and Whiteleas-way respectively.—Cackett, Burns Dick & Mackellar (F/A), 21, Ellison-pl., Newcastle-on-Tyne, are A for proposed factory additions at Bede trading estate for Thermotank, Ltd.—Crushing, Screening & Engineering Co., Ltd., Bede Trading Estate, Jarrow, propose factory and offices at Jarrow-rd.—Plans by T. A. Page, Son & Hill (F/F), 75, King-st., South Shields, for licensed premises at Prince Edward-rd., for Newcastle Breweries, Ltd., have been approved.—Vaux and Associated Breweries, Ltd., The Brewery, Sunderland, to erect public-house at Lakes-ave.

Staffs.—CC received Ministry approval for new day special sch. at Newcastle-under-Lyme in 1958/9 programme; propose erection of new

Fire Brigade headquarters at Stafford and new hostel at The Poplars Nursery, Lichfield.

Stockport.—PC Council of St. Paul's Church, Portwood, propose new branch church at Brinnington estate, £12,000 est.

Stockton-on-Tees.—Dowsett Land Investment, Ltd., are planning development of 20 acres of land at Egglescliffe for making of prestressed concrete structural units and components.—Bradley & Co., builders, York, propose developing private housing site of 21 acres adjoining Elton Hall.

Sunderland.—NCB has approved scheme for block of offices at Whitburn to be completed in 1959. A Dept., Kenton, Newcastle.

Sunderland.—Northern Gas Board has prepared scheme for extending and modernising Hendon gas works to increase output by four million cu. ft. of gas a day. Mangr. and engr.: W. O. Kirkwood.

Sunderland.—British Railways to send TC final plans of scheme to reconstruct railway station.

Sunderland.—Plans approved for new garage at Toward-rd. to replace bus depot at North Docks. Boro' A.

Sunderland.—TC is being recommended to appropriate land for another four children's homes. Boro' A: H. C. Bishop (A), Grange-hse., Stockton-rd., Sunderland.

Tynemouth.—TC to reconsider layout plan by John T. Bell & Sons, Ltd., builders, Newcastle, for development of land at Cullercoats for private houses and shops, public-house and filling station.

Wallsend.—TC to apply for loan to build library at Tynemouth-rd., £12,000 est. Boro' S: C. E. Faddy.

Wallsend.—Plans approved for alterations and extensions to public slipper baths. A: Percy L. Browne, Son & Harding (F/F), Pearl-bldings., Northumberland-st., Newcastle.

Wallsend.—NCB has planned big development scheme at Rising Sun Colliery to include new shaft, winding tower and gear and buildings. Area Production Manager: J. Thompson.

Wallsend.—W. B. Reid & Co., Ltd., The Leazes, Upper Claremont, Newcastle-on-Tyne, to reconstruct their 'Engine' inn and preparing own plans.—L. J. Couves & Ptnrs. (F), Carliol-hse., Newcastle-on-Tyne, are A for factory buildings at Neptune-rd., for Thermal Syndicate, Ltd.—Tudor Food Products, Ltd., 3a, Sandyford-rd., Newcastle-on-Tyne, are planning new factory on coast road.—Boro' E (C. E. Faddy) has prepared sketch plan of proposed industrial estate at Willington-sq. on north side of coast road.

West Hartlepool.—Plans by Boro' A (A. G. Sinclair) for 20 houses, 8 bungalows, and 16 two-storey flats at Seaton Carew approved.

West Hartlepool.—RC prim. sch. to be built at Callander-rd. in connection with St. Teresa's Church. A: R. Burke (L), 10 Lambton-rd., Newcastle.

West Hartlepool.—R. H. Duns, Lambton-hse., Lambton-rd., Newcastle-on-Tyne, appointed QS, and Cairns & Byles, 8, Osborne-rd., Newcastle-on-Tyne, heating and electrical consultants, by EC for proposed Grange county prim. sch. Sketch plans to be prepared by Boro' A, A. G. Sinclair (A).

Wolverhampton.—BC approved erection of clinic at junction of Probert-rd., Oxley Moor-rd. and Stafford-rd., £20,000 est., and new changing accommodation at Race Course playing field, £10,000 est.

TENDERS

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modification.*
¶ Denotes *accepted by H.M. Government Departments.*

Alnwick.—Proposed sewerage scheme, for UDC. Constg. engrs.: D. Balfour & Sons, 145 Pilgrim-st., Newcastle-on-Tyne. *Gustavus Bailey, Ltd., The Drive, Gosforth. £99,826.

Alnwick.—New St. Mary's RC sec. sch., for RC Authorities. A: Reavell, Cahill & Cahill (F/F), Lloyds Bank-chbrs., Alnwick. *R. Carse & Sons, Amble, Northumberland. £74,000.

Blackburn.—Conversion of Beardwood Hall into hospital for RC Authorities. *James Whittaker & Sons, Ltd., Bastwell, Blackburn.

Blackpool.—10 houses at Mereside, Kentmere-dr. and Troutbeck-cres., for BC. *R. Fielding & Son (Builders), Ltd., Stanhope-rd., Blackpool, £15,136.—20 houses at Mereside estate. *R. Fielding & Son (Builders), Ltd., £26,402.

Bradford.—New store premises at junction of Broadway and Charles-st. for C. & A. Modes, Ltd. *J. Gerrard & Sons, Ltd., Swinton, nr. Manchester.

Bury St. Edmunds.—16 flats and 12 houses at Raingate-st. for BC. Boro' E&S: N. C. Goldsmith, MBE, MIMunE. QS: G. A. Lewis, FRICS. *Direct labour, £31,549.

Carlisle.—Contracts placed by City C, November 12-December 2:—Supply of metal windows—38 houses, Morton estate. *Ideal Casements (Reading), Ltd. £1,067.—Supply of carcassing timber—38 houses, Morton estate. *John Herring & Co., Newcastle-on-Tyne. £4,679.—York special sch. and Creighton sec. sch.—electrical installations. *Ben Oliver, Carlisle. £1,707 and £430.

Chester.—New Plas Newton jun. sch. for EC. *Thos. Warrington & Sons, Ltd., Ellesmere Port, **£51,495.**

Felling, Co. Durham.—Second stage of reconstruction scheme at Abbotsford-rd. depot, for UDC. S: R. Morton. *John Clark & Son, New Seaham, Co. Durham. £12,500.

Hebburn.—Second instalment of county technical college. *T. Clements & Sons, Selbourne-gdns., Newcastle. **£143,447.**

Ipswich.—22 houses, Chantry estate 2B, for CBC. Boro' E&S. QS: Ashford & Ptnrs., Princes-st., Ipswich. *Macro (Ipswich), Ltd., 80, Henley-rd., Ipswich. £32,996.

Lanchester.—20 houses at Burnhope to rehouse people displaced under slum-clearance schemes, for RDC. S: J. A. Routledge. *Direct labour.

Liverpool.—Six flats at St. Domingo Vale. *Direct labour, £12,355.

London (British Railways).—Contracts placed by Southern Region:—Brighton Goods: New staff accommodation. Saunders Watts, Ltd., Brighton.—Dorking North: New staff accommodation. Y. J. Lovell & Son, Ltd., Horsham.—St. Leonards, West Marina: New carriage shed, ancillary works and buildings and foundations for carriage washing plant. Taylor Woodrow Construction, Ltd., Southall, Middx.—Blackheath station: Renovations. Caffin & Co., Ltd., WC2.—Portsmouth (Gosport Ferry): Passenger landing stage. Harland & Wolff, Ltd., E16.—Bricklayers Arms: Renovations of canteens and various office buildings. P. & M. Contractors, Ltd., SW1.—Mottingham sub-station: Waterproofing to asphalt roofs. Structural Waterproofers, Ltd., W6. Hellingly station: Renovations, C. & C. J. Pannett, Lewes, Sussex.

London (British Railways).—Contracts let by London Midland Region:—Brooks Ventilation Units, Ltd., Trafalgar-hse., Gt. Newport-st., WC2, for installation of inlet plant at iron foundry, Locomotive Works, Crewe.—John Booth & Sons (Bolton), Ltd., Hulton Steelworks, Bolton, for steelwork strengthening and extension to crane gantry on Londonderry shed and improvements to Heysham harbour.—North-Western Gas Board, Mid-Cheshire Group, 5-7 Market-st., Crewe, for iron foundry heating, Locomotive Works, Crewe.—Kind & Co., Ltd., 564 High-rd., Leytonstone, E11, for improvements to passenger station, Hatch End.—E. B. Jones & Rawlinson, Ltd., Leaf-sq., Salford 6, Lancs, for new station buildings, Burnage and East Didsbury stations.

London (British Railways).—Recent contracts placed by North-Eastern Region:—Supply of prestressed concrete cable duct units, Dow-Mac (Products), Ltd., Stamford.—Dinsdale rail welding depot: flooring, R. Blackett & Son, Ltd., Darlington.

London CC.—26 maisonettes and nine flats, 16 tenants' stores, five garages and playground at Barnabas-rd. site, Bethnal Green. *Direct labour. £99,830.

London CC.—Area office, works depot and playground at Brandon estate, Southwark and Camberwell. *Direct labour. £13,884.

London CC.—88 maisonettes in three four-storey blocks, 10 tenants' stores, nine garages and playground at Leatherdale-st. site, Stepney. *Tersons, Ltd., £231,200 (extension of existing contract).

London CC.—Construction at Kender estate extension, Deptford, of 18 maisonettes in a four-storey block, 20 flats in a five-storey block and 7 two-storey houses, together with 13 tenants' stores, an estate workshop and yard. Prices on basis A are subject to fluctuations both in rates of wages and materials and those on basis B in rates of wages only.

	Basis	£
M. J. Gleeson (Contractors), Ltd., Cheam, Surrey ..	A	116,325
A. T. Rowley (London), Ltd., Tottenham	A	112,807
Thomas & Edge, Ltd., Woolwich	A	111,233
The Unit Construction Co., Ltd., Feltham, Middlesex ..	A	110,450
Walter Lawrence & Son, Ltd., Finsbury	A B	110,000 111,000
W. J. Simms, Sons & Cooke, Ltd.	A	105,583
Rowley Bros., Ltd.	A	105,343
*Tersons, Ltd., Finchley ..	B	106,806

Architect's comparable estimate on basis B is £112,303.

¶London (War Dept.).—Works contracts placed for week ended December 6:—*Berkshire*: Electrical, Colston Electrical Co., Ltd., Bristol. *Dorset*: Building, W. G. Taylor & Sons, Weymouth. *Nottinghamshire*: Painting and decorating, Arundel Painting Contractors & Co., Louth. *Wiltshire*: Painting and decorating, Downer & Bailey, Ltd., Downton, Salisbury.

¶London (Metropolitan Police).—Tenders for building works:—Exterior and interior redecorations, Gipsy Hill PS & MQs. George W. House & Sons, Ltd., £1,121.—Exterior redecorations, Woolwich PS & Mag. Court. Thos. MacFarlane, £850.

¶London (MoW).—Contracts placed for week ended December 6:—*Bedfordshire*: Luton and Dunstable district, maintenance work, W. Watson, 26, West-st., Dunstable. *Hampshire*: Post Office, Emsworth, alterations and decorations, J. Lay & Co. (Portsmouth), Ltd., 205/7, Arundel-st., Portsmouth. *London*: Quartermaster General's Offices, 10, Whitehall-pl., SW1, new shaft motor room and pit, W. & M. Negus, Ltd., Station Works, King James-st., SE1. *Montgomeryshire*: Joint Office Building, Agricultural-hse., Newtown, adaptations, A. R. Jones & Son, Ltd., Pool-rd., Newtown. *Nottinghamshire*: Post Office, Nottingham-rd., Eastwood, alterations and adaptations, Progressive Builders, Ltd., Lowater-st., Nottingham; Inland Revenue Office, Ashmead-chmbrs., Regent-st., Mansfield, ingoing services, Crooks & Butler, Ltd., Victoria-st., Mansfield. *Oxfordshire*: Government Buildings, Oxford, internal decorations, J. J. Hamilton & Sons, 4, Perrin-st., Headington, Oxford. *Sussex*: Ministry of Pensions and National Insurance, 166/8, Western-rd., Brighton, alterations and adaptations, W. Willett, Ltd., 12, Grand-ave., Hove, 3, Sussex. *Warwickshire*: Telephone Exchange and Telephone Repeater Station, Rugby, erection of extension, Foster & Dicksee, Ltd., James-st., Rugby. *Worcestershire*: Post Office and Sorting Office, High-st., Blackheath, nr. Dudley, adaptations, A. Franklin & Sons, Ltd., 44, Hamstead-rd., Birmingham, 19; Ministry of Supply, Radar Research Establishment, St. Andrews-rd., Malvern, alterations to canteen, T. Oliver (Builders), Ltd., St. Martins-pl., Worcester.

Long Eaton.—62 dwellings at Draycott-rd., Sawley, for UDC. *F. Perks & Son, Ltd., Bridge-st., Long Eaton, **£73,040.**

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Manchester.—Extensions at Wellington Mill, Pollard-st. East and Beswick-st. for Hugh Stevenson & Sons, Ltd. *Hill & Jones, Ltd., 37, Garden-st., Manchester.

Middlesbrough.—Construction of pipe bridge over River Tees at Eaglescliffe, for Tees Valley Water Bd., Corporation-rd., Middlesbrough. Bd.'s Ch. E: T. S. R. Winter. *Dowsett Engineering Construction, Ltd., Durham-rd., Low Fell, Gateshead. £58,830.

Nantwich.—30 houses for UDC. *J. Yeardsley & Co., Ltd., Congleton, £41,337.

Newcastle-on-Tyne. — Reconstruction of Cross-st. public conveniences, for City C. *George Bainbridge, Ltd., 205 Westgate-rd., Newcastle. £12,000.

Nottingham.—Erection of Holy Trinity church, Clifton. *W. & J. Simons, Ltd., Gordon-rd., West Bridgford, Nottingham.

Redcar.—137 houses and 30 bungalows at Green-la. estate, for TC. Boro' E: K. W. Ash. *F. Shepherd & Sons, Ltd., York (subject to Ministry approval).

Richmond, Yorks.—14 houses at Brompton-on-Swale, for RDC. Plans by S, Swale-hse., Richmond. *R. H. Thistlethwaite, Leyburn, Yorkshire. £20,160.

Runcorn.—32 bungalows and wardens' hostel at Queens-rd. estate for UDC. *W. E. Jones, Ltd., King-st., Middlewich, £55,612.

Sheffield.—Extensions to factory premises at Rockingham-st. for J. Townroe & Sons, Ltd. *C. L. Marcroft, Ltd., Totley, Sheffield.—Extensions to sec. and commercial sch. premises at Broomfield-rd. for Gregg School (Sheffield), Ltd. *B. Powell & Son, Ltd., 37, Cavendish-st., Sheffield.

Shipley.—53 houses at Coach-rd., Baildon, for UDC. *Direct labour.

Sunderland.—Construction of dwarf walls for about 800 houses and supply and erection of gates, for TC. *J. Prentice, Leeds-st., Sunderland. £19,503.

Sunderland.—New Mowbray Hostel, for TC. Boro' A: H. C. Bishop (A), Grange-hse., Stockton-rd., Sunderland. *Direct labour. £15,000.

Sunderland.—New blacksmith's shop, welding shop and funnel shop, for William Doxford & Sons, engineers and shipbuilders, Pallion. *Brims & Co., Ltd., Pandon-bldgs., City-rd., Newcastle-on-Tyne.

Sunderland.—Four family group homes, for TC. Boro' A: H. C. Bishop (A), Grange-hse., Stockton-rd., Sunderland. *T. Stewart, 37 The Westlands, Sunderland. £16,300.

Sutton-in-Ashfield.—Works for UDC:—18 flats and site works at junction of Leamington-dr. and Jephson-rd. *M. D. Sweeney & Palmer, Ltd., Aspley, Nottingham; six flats on same site. *J. Searsons, Ltd., Station-rd., Sutton.

Walton and Weybridge.—40 houses at Brooklands site (Section 3) for UDC. E&S: E. A. Lister, AMICE, MIMunE. *John Farmer (Builders), Sunbury, 45/47, Hanworth-rd., Sunbury-on-Thames, Middx., £61,971.

Washington, Co. Durham.—71 houses and flats at Coach-rd. estate, for UDC. S: T. E. Crowe. *Cussins (Contractors), Ltd., The Drive, Gosforth, Northumberland. £91,013.

Wellingborough.—14 houses at Wilby for RDC. *Drabble Construction, Ltd., Breeze Hill estate, Wellingborough, £19,427.

Wellington.—Extensions to factory at Hadley Castle Works for Joseph Sankey & Sons, Ltd. *Wilson Lovatt & Sons, Ltd., Clarence-st., Wolverhampton.

West Hartlepool.—New fire station, for TC. Boro' A: A. G. Sinclair (A), Municipal-bldgs., West Hartlepool. QS: R. H. Duns, Lambton-hse., Lambton-rd., Newcastle-on-Tyne. Consultants for heating and electrical work: Cairns & Byles, 8 Osborne-rd., Newcastle-on-Tyne. *W. W. Brazell, Ltd., Raeburn-st., West Hartlepool. £39,560 (subject to Ministry approval).

Workington.—Sec. mod. sch. at Salterbeck for Cumberland CC. *John Laing & Son, Ltd., Dalston-rd., Carlisle.

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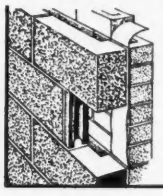

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